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Table of Contents

PREFACE v

MEMBERS OF THE ONTARIO ECONOMIC COUNCIL vii

SUMMARY AND RECOMMENDATIONS 1

THE PROSPECTS FOR BUSINESS CAPITAL INVESTMENT 7

PRINCIPAL POLITICAL, ECONOMIC AND FINANCIAL TRENDS INFLUENCING THE VOLUME AND TIMING OF CAPITAL INVESTMENT 15

APPENDIX A: TABLES AND FIGURES 71

APPENDIX B: RESULTS OF QUESTIONNAIRE ON BUSINESS ATTITUDES TO THE INVESTMENT OUTLOOK FOR THE NEXT FIVE YEARS 117

Preface

As a continuation of its series of papers on "Issues and Alternatives", the Ontario Economic Council this year is issuing two papers. One concentrates on the subject of private business investment, the other on the regulatory activities of governments. In addition, we are publishing an update of the economic projections of the Ontario economy to 1987, first published last year and prepared by economists at the Institute for Policy Analysis at the University of Toronto.

The purpose of these papers, as of those published earlier in this series, is to highlight major issues as we see them, to stimulate informed public debate on these issues and to provide a framework for discussion about possible improvements in government policies.

In the Council's view this paper focusses on one of the major questions facing Ontario at present: how to increase private business investment and, along with it, productivity and employment. Consideration is given to the characteristics of private investment, its development over recent years and the impediments to its growth. In addition some suggestions are offered about what policy changes might be adopted to increase the level of business investment.

Much of the work in preparing this paper was done by John Popkin which we gratefully acknowledge. In addition, we are grateful for the assistance provided for the sections dealing with specific industries by several persons directly associated with the industries in question.

It is the Council's hope that this report will focus attention on this important issue and thereby contribute to the improvement of policies in this area at all levels of government.

While each member of the Ontario Economic Council does not necessarily subscribe to everything contained in this report, the report does reflect a consensus of the members.

G. L. Reuber
G. L. Reuber
Chairman
Ontario Economic Council

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Summary and Recommendations

It is universally acknowledged that the Canadian economy faces serious difficulties in the years ahead; the unemployment rate is unacceptably high, as is the rate of inflation. Output is well below potential. Recovery is expected to be slow. And it is questionable whether, without some fundamental policy changes, even a fully employed economy will generate the increased flow of goods and services that Canadians have come to expect as a result of the rapidly rising living standards experienced in the past several decades.

The factors that contributed to our current and continuing difficulties are both many in number and inter-related in an exceedingly complex manner. Opinions differ markedly about their relative importance. But one is universally accepted: some of the adverse forces were international in origin and some were of our own making. And the future course of the Canadian economy will continue to depend upon trends in the international economy and upon domestic policies.

Although Canada can have some influence upon international developments, both directly through our international trade and investment activities and indirectly through our influence on the economic policies of other nations and international agencies, our impact on international developments, though not insignificant, is likely to remain marginal compared to that of the major actors: the U.S., the European Common Market and Japan. While it would be foolish to ignore the fact that the international economy imposes severe constraints on the Canadian economy, it would be equally foolish to fail to recognize that changes in the world economy can offer important opportunities, perhaps even more so because our influence on that economy is marginal. Smallness has its advantages as nations such as Sweden and Switzerland have demonstrated. As alternative domestic economic policies are considered we should constantly take into account the opportunities for Canada in the world economy. This said, one should also recognize that, in the near term, the prospect of continuing slow and hesitant economic growth among the major industrialized countries of the world will result in even greater competitive pressures in international trade and increase the demand within the countries to which we export for greater tariff and other kinds of protection. This suggests that international developments in the next five years or so will tend to reinforce rather than alleviate the present weakness in the Canadian economy. High relative costs, low rates of corporate profitability and cash flow, a high degree of business uncertainty and disruptive labour/management conflicts will all have magnified negative effects upon Canadian employment, prices and output because of the greatly increased degree of international competition. The performance of the Canadian economy over the next few years will depend, in no small measure, upon how our attitudes, practices and policies change with respect to work, investment and innovation relative to the changes that occur in other countries. In some fields Canadians need not only to keep up but also to catch up.

This paper has focused on business investment. Such investment plays a key role in the renewal, expansion and technological advances embodied in the capital stock of the country. The size and quality of this stock is a prime determinant of our future economic prosperity. A central issue facing Canada, from the standpoint of increasing employment and output and stabilizing prices in the future, is how to increase and upgrade the quality of our capital stock through increased business investment.

Before proceeding with the discussion of our recommendations concerning business investment, we must make explicit the time dimension we have in mind. We are *not* suggesting stimulants to business investment as an immediate "solution" to Canada's current economic difficulties. With substantial productive capacity already overhanging the economy it would be extremely difficult to induce additional private business investment at this time except in special circumstances (e.g. the Alaskan pipeline). Rather we are speaking about policy changes to be made in the near term that would start bearing fruit a few years from now when the economy will, with good luck and good management, once again be operating close to its potential.

A variety of factors that have influenced business investment in the past have been reviewed. Most of them are highly interdependent. At the risk of over simplification one may categorize the principal barriers to greater business investment in recent years as follows:

1. political uncertainty and the ever increasing intervention of governments that impinge on the business decision-making process;
2. inadequate private demand, internationally and domestically;

3. surplus capacity in a number of industries reflecting not only a general lack of aggregate demand but also shifts in the competitive position of particular industries;
4. inadequate rates of return on investment, partly because of low levels of demand but also because of relatively high costs of labour and other inputs, relatively high costs of complying with government regulations and policies, and the increasing costs of doing business in an increasingly politicized economy;
5. a relative reduction in internal cash flows for investment purposes because of lower after-tax profits and because of the adverse impact of inflation on the adequacy of depreciation allowances for the replacement of older machinery, equipment and structures;
6. the relatively high cost (sometimes expressed as "crowding out") of external financing because of competition from the public sector domestically and the higher cost of financing in foreign capital markets.

Given our present circumstances, what can usefully be done through government policy changes, at both the federal and provincial levels to increase the level of private investment in the time horizon we have in mind?

First and foremost among the several steps required to place the economy on a different path is a continuation and in some cases strengthening, of our current efforts to realign general monetary and fiscal policies. As emphasized by the Council a year ago, such policies need to be geared to medium term prospects and opportunities. Attempts at "fine-tuning" should be avoided. For monetary policy this means, essentially, increasing the money supply at a rate that maintains a stable relationship to increases in real output and allowing interest and exchange rates to move freely in response to market forces. As far as fiscal policy is concerned, further efforts are needed to curb the growth of public expenditures at all levels of government so that they no longer rise more rapidly than total output and preferably less rapidly. Sustained efforts are also needed to reduce government deficits. Considerable progress has been made along these lines during the last year or so, particularly in Ontario, but more remains to be done.

Would a federal tax cut be appropriate now in order to stimulate aggregate demand – recognizing that, in the short-term, this would add to the deficit which is already frighteningly large (about $8.5 billion for fiscal 1977-78)? It also has to be admitted that a large deficit, financed by the sale of federal bonds in Canada, would tend to increase interest rates which would hardly be conducive to greater domestic investment or would be floated by a more rapid increase in the money supply that would have inflationary implications. If, on the other hand, the requisite federal bonds were sold abroad this would tend to increase the value of the Canadian dollar in international markets – and this would not be conducive to increased exports, reduced imports and increased business investment.

Clearly the possibility of a tax cut presents a kind of Hobson's choice to government decision makers: there is no "answer" that does not have unfavourable consequences. About all that can be said is that a valid (but disputatious) case can be made for a relatively modest tax reduction and that the most appropriate cut would apply to the manufacturer's sales tax of the federal government or, preferably, to the sales taxes of the provincial governments plus cuts in excise taxes. Sales – excise tax cuts would have two advantages: they would *tend* to reduce domestic retail prices and also reduce the demand for cash balances which, in turn, would tend to minimize the upward pressure on interest rates resulting from increased government borrowing.

While certainly tempting, it probably would be preferable to forego the sales-excise tax reduction in the near term unless it could be achieved by cutting anticipated expenditures so as not to increase the deficit. When the economy is operating closer to its potential, fiscal policy could then become, once again, a flexible instrument and the sales-excise tax cut much less dangerous. Such a cautious approach may delay the achievement of full employment but it would also ensure that when achieved, it would be firmly based and conducive to a higher rate of business investment.

While general monetary and fiscal policies necessarily play the central role in determining our economic outlook and hence investment prospects, it is evident that close attention should also be given to a wide variety of structural policies. To date, much less progress has been made in redesigning these policies than in recasting general monetary-fiscal policies. Yet it is evident that many specific policies have had important, but often unintended and unanticipated effects – both positive and negative – upon investment in this country. Too frequently such specific policies have been developed on a piece-meal basis in pursuit of non-economic goals without adequately recognizing their cumulative, indirect effects on costs, investment and employment. Examples of such policies are found in such diverse areas as environmental policies, land-use policies, agricultural policies, welfare policies, regional development policies, trade and industrial policies, resource policies, labour policies, government regulations of all kinds, and so forth.

This raises a host of complicated questions that cannot be pursued here. What is called for is a systematic and detailed review of all such current policies to see how they might be redesigned to make them less costly in terms of investment, employment and price stability while still advancing their primary objectives in other areas.

This provides a very long and very difficult agenda that would take a long time to complete. Moreover, a high degree of inter-governmental collaboration and cooperation would be required if the job were to be done well. Nevertheless, such an approach, while admittedly extremely difficult to implement effectively and expeditiously, should be an essential element in our post-controls strategy.

In addition to continuing to realign monetary and fiscal policies, and initiating a redesign of many specific policies that often inadvertently shape the structure of the Canadian economy perversely, the Council believes that consideration should be given to some particular policies that might serve to increase the level of business investment in this country particularly if the foregoing steps were taken to create favourable conditions. Among the possibilities that might be considered some are briefly sketched below.

1. Both the provincial and federal governments might set a target of "zero net cost-raising measures" for a number of future years.[1] Under such an arrangement, new government measures raising costs to employers or to consumers would have to be offset by policy changes in other areas that would reduce costs by a corresponding amount. The government would agree to table in the House a report estimating the degree of fulfilment of the target at regular intervals. Such an approach, if effective, would stop the escalation of government created cost/price pressures that have been deleterious in the past. A further step, of course, would be to establish a target rate of decline in previously legislated cost/price increases bearing on producers and consumers.
2. The announced increase in the dividend tax credit effective January 1978, should help to boost equity prices and thereby reduce the cost of equity capital to Canadian corporations. Adoption of a symmetrical treatment of capital gains and losses would have the same desirable impact.
3. When sales tax cuts can be introduced it would be highly desirable to ensure that the burden that they now place directly on business investment be eliminated.
4. Although some accord now seems to be gradually emerging, the unseemly tug of war between the federal and provincial governments concerning the level and allocation of tax revenues (broadly defined) derived from Canadian resource industries has undoubtedly deterred private investment in that sector if for no other reason than it has raised the level of uncertainty in which investment decisions have had to be made to intolerable levels. It is imperative that this barrier to additional investment be removed by federal-provincial agreements with respect to resource taxation that are realistic from an international competitive point of view, are of a long-term nature and are promptly announced.

Given the current low level of business investment, an inadequate supply of funds is not now a major problem restraining the volume of investment. However, as the level of investment gradually accelerates, led by energy and resource developments, the need will arise to redirect a larger percentage of domestic saving from the government to the private sector and from short term investment instruments to longer term instruments more suitable for financing longer term capital investments. An increased flow of private savings from the public to the private sector could be encouraged in several ways. The largest flow to the government sector occurs through the medium of the Canadian Pension Plan. Consideration should be given to depositing at least a portion of the net contributions (after benefit payments and administrative expenses) in a special trusteed fund in each province to be available to the private sector on a competitive bid basis. To ensure the maximum availability of such funds to finance business capital investment it might be desirable to limit the use of such funds to equities or debt with a term of ten years or longer.

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[1] This proposal has recently been made by Arthur Okun, a former member of the Council of Economic Advisers in the United States in *Challenge* November/December, 1977, pp. 12-13.

The main theme running through many of these suggestions is the desirability of shrinking the cash requirements of all levels of governments to free additional private savings to finance the increase in private capital investment that, in the longer run, is the prerequisite for increased productivity, the restoration of our international competitive position and a reduced reliance on external capital.

The foregoing suggestions by no means exhaust the list of possibilities for improving the climate for private investment. Nor can we claim to have assessed the relative merits of these suggestions in any detail. These proposals are advanced primarily to illustrate that there are a number of avenues to be actively explored. Examining and developing such proposals is the responsibility of both the provincial and federal governments. To be effective, work on such proposals will require close collaboration among all levels of government.

The question of what structural changes might be introduced in this country through government policies to increase the level and efficiency of business investment is difficult and complicated in both economic and political terms. Nevertheless, we believe this is an issue of the highest priority if Canada is to achieve higher employment, greater price stability and more rapid economic growth in the foreseeable future as well as to advance many of the other national objectives to which most members of our society aspire.

The Prospects for Business Capital Investment in Ontario

Introduction

The role of business capital investment in fueling growth in the economy and creating a rising standard of living is not well understood or appreciated by the general public. For that reason when such factors as domestic and international trends, governmental regulations and public attitudes have a negative effect on the investment process they are either ignored or ineffectively challenged.

This report, with particular emphasis on the situation in Ontario, describes the main characteristics of the investment process, the criteria that have to be satisfied in reaching an investment decision, and the principal short- and long-term influences that will affect the volume of capital spending over the next five years. Also discussed are potential problems in generating the flow of savings, both in volume and form, required to finance the level of investment needed during this period to improve energy self-sufficiency and provide the industrial capacity to allow the economy to expand at its potential non-inflationary growth rate.

The historical record

Tables A25 to A28 in the appendix record the volume of business capital spending in Canada and Ontario for the major industrial sectors since 1965. Total capital spending, excluding housing, has contributed roughly the same percentage to economic growth in Ontario as in Canada as a whole,[1] while the proportions of total capital investment in Ontario devoted to the primary and manufacturing industries has been respectively one-half of and one-third greater than that for the entire country. Percentages of total investment contributed by the utilities, trade, and financial services have been roughly similar to the national percentages. Buoyant business capital spending in Ontario over the next five years, or longer, will be encouraged by vigorous growth in the manufacturing sector. Capital spending in the housing, trade, commercial, and institutional sectors is likely to play a supportive rather than a stimulating role in total capital spending.

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[1] Over the past ten years current dollar investment averaged roughly 18 percent of GNE for Canada as a whole and 17½ percent of GDP for Ontario.

Cyclical characteristics of business capital investment

Historically, business capital investment has been a major source of instability in the Canadian economy.

The average annual growth rate and percentage deviations from the growth trend for major sectors of the Canadian economy for the period 1948-70 were as shown in Table 1. In a more recent study by the Conference Board in Canada, commissioned by the Business Council on National Issues, a similar cyclical pattern is evident, as illustrated in Table A1 in the appendix. Tables A2 and A3 illustrate the frequency, allocation, and lead or lag characteristics of the investment cycle in the post-war period.

Table 1

Growth and Variations in Business Investment by Sector: Canada 1948-70

Expenditure sector	Average annual growth rate (%)	Average deviations from trend (%)
Consumer	4.8	2
Government	5.3	6
Housing	4.1	11
Non-residential construction	4.7	10
Machinery & Equipment	4.9	11
Total Gross National Expenditure	5.0	2

Source: Toward a More Stable Growth in Construction (Economic Council of Canada) p. 100

As a general observation, the residential construction cycle is shorter (four to five years), more regular, and tends to peak in advance of general business activity in comparison with the non-residential construction cycle, which is longer (twelve to thirteen years) and tends to lag behind the peak in over-all activity. While the machinery and equipment cycle appears to come under the influence of the long construction cycle, it also has superimposed on it a four- to five-year cycle.

Industries vary considerably in their contribution to instability in non-residential construction, as illustrated in Table A4. Transport, government mining, utilities, services, and manufacturing accounted for 80 percent of the instability contributed by non-residential construction. Within the manufacturing sector, pulp and paper, primary metal, and the automobile and transportation equipment industries accounted for one-half of the instability in this sector, while petroleum, coal, and chemical industries accounted for an additional 20 percent. In an analysis of the causes of instability in the non-residential construction industry for the years 1955-68, the Economic Council of Canada found the most important cause, accounting for approximately 30 percent of total instability in the industry, was the bunching or lack of smooth scheduling of large construction projects. In comparison, the analysis found that countercyclical monetary and fiscal policies would have reduced non-residential construction instability by 18 percent and instability in industrial production and industrial bond prices by 16 percent and 12 percent respectively.

Business capital expenditure dollars are ‘high-powered,’ because they create additional employment, income, and output demand in other sectors of the economy greater than the original effects in the non-residential construction and machinery industries themselves. For the period of four years following the expenditure of an additional $100 investment in housing or business plant and equipment, this multiplier factor is estimated at around 1.7 for residential construction and 1.6 for fixed business investment. The timing and strength of this leverage factor will vary according to the degree of slackness or tightness in over-all economic activity when a rise in business activity occurs. If the economy is slack and operating well below full utilization of employed labour and plant capacity, the pressure of new demand will be absorbed initially by more intensive utilization of currently employed labour resources and plant facilities. As plant utilization rates rise to the 85-90 percent range and the cushion of skilled labour becomes absorbed, the pressure increases to expand production potentials. This often takes the form of more intensive use of present facilities, for example, adding an extra work shift, speeding up machine output, or bringing unused older plants and equipment back into production even at the cost of some loss in efficiency. As markets continue to grow and lack of additional productive capacity threatens firms with loss of markets and potential profits, major expansion plans are researched, planned, and executed. This delayed response of capital expenditures to a revival in market demand is particularly characteristic in the manufacturing and commercial sectors because the time from planning to execution is typically shorter than in large projects in the resource and energy fields, where more advanced planning is necessary.

When cyclical fluctuations in total business capital spending, including resource and energy development, are compared with that of GNE as a whole, no consistent lag relationship of capital spending is evident. This apparently is the result of the smoothing effect of energy and resource development expenditures, the timing of which is not related directly to the cyclical pattern of over-all economic activity.

The Bank of Canada has constructed an industrial capacity utilization series that excludes energy-related industries consequently revealing more clearly the relationship between increases in output and capacity additions, shown in Figure A1.

It is interesting to contrast the relationship between the trend in output and additions to capacity in the two periods since 1960, (early 1966 and 1974) when capacity utilization rates peaked at or slightly above 95 percent. In the earlier period strong percentage gains in output commencing in 1962 resulted in large percentage increases in capacity in 1965-7. Lower rates of output in succeeding years combined with the earlier large additions to capacity dropped capacity utilization rates from 97 percent in January 1966 to approximately 87 percent at the end of 1970. Increasing rates of output in the period 1970-3 drove capacity utilization rates to 95 percent by the end of 1973. In contrast to the earlier period when additions to capacity responded strongly to the high capacity utilization rate in 1966, the weak performance in output since 1973, which brought a swift decline in the capacity utilization rate, has inhibited any strong revival in business capital spending. As will be discussed in later sections of this report, factors other than low capacity utilization rates have contributed to the sluggish trend in capital spending, but clearly excess capacity has been an important influence.

In summary, business capital investment is a volatile component in over-all economic activity and in the past has been a major source of instability in the economy. The degree of instability has been considerably greater than in the United States, particularly in the non-residential construction sector. The major source of this instability has been identified as the bunching of large construction projects principally associated with resource and energy developments. Other important sources of instability include fluctuations in the flow and cost of investment funds and cyclical fluctuations in over-all economic activity.

Business investment both responds to and initiates fluctuations in over-all economic activity. In the area of resource and energy development it plays largely an initiating role since the timing of such projects is geared closely to the discovery, availability, and exploitation of economically viable resources and is only minimally influenced by the particular stage of the business cycle. In the manufacturing industry on the other hand the volume of investment fluctuates in response to past and prospective levels of output demand and input costs, and to current and prospective trends in such factors as the political climate, the tax regime, corporate profitability, and the availability and cost of investment funds. In the future a major policy concern with respect to business investment will be to prevent, as much as practicable, a bunching of large projects in the resource and energy fields, which could increase the instability of the economy by initiating upward price and wage pressures. In the manufacturing sector the emphasis should be the creation of a climate of encouragement and certainty.

In order to minimize the destabilizing influence of business capital investment on the economy, certain criteria should be established. To the extent practicable, a concentration of large construction projects over a short period could be minimized by establishing a priority list for such projects. The apparent simplicity of such a solution masks the practical difficulties of postponing a resource or energy development whose economic or competitive time has arrived. An additional difficulty might be encountered in obtaining the consensus of provincial governments on such priorities, given the growing competition among provinces for development projects that will spur economic growth and create jobs. The problem is illustrated by the limited success achieved in establishing an orderly offering list of new government and industrial bond issues on either domestic or external markets when the cost of bunching issues is readily measurable. Nevertheless, in spite of the difficulties, an attempt to establish a more orderly scheduling of large projects is worth pursuing. For capital investment as a whole, but particularly in manufacturing, greater stability in investment depends on such considerations as a stable growth pattern for the economy, future political and social stability, a large degree of certainty regarding the tax position during the payback periods of the project, an adequate and more even flow of investment capital, and a greater appreciation by government and the public of the crucial role played by corporate profit generation, not only in creating the capital to finance new projects, but also in providing the stimulus to business to assume the large risks involved in undertaking new capital investment in a most uncertain climate.

Until the decade of the 1970s the annual compound growth rate of constant dollar investment kept pace with the approximate 5 percent annual rate of growth for the economy as a whole. Over the last six years, the annual growth rate in capital investment has lagged well behind the potential growth rate of the economy as Table 2 indicates.

Of particular interest and concern is the declining growth rate in the manufacturing sector. While part of the decline can be attributed to cyclical weakness in the economy in 1974-5, the deterioration predates the recession and is to a degree symptomatic of the deteriorating competitive position of the manufacturing sector in world markets. The Conference Board in Canada's productivity study found that, while increases in Canadian produc-

Table 2

Investment Trends – Constant Dollars (Percentage compound growth rates in constant 1971 dollars)

	1950-60	1960-70	1970-5	1976-7 (est.)
Manufacturing	5.9	7.5	1.8	–3.1
Primary & constr.	2.0	5.4	8.2	2.4
Utilities	13.0	4.4	7.1	0.5
Trade, finance, services	5.2	4.2	13.1	–8.2
Gov't department	7.8	3.4	4.3	–2.5

tivity had outpaced those in the U.S. since 1967, Canadian productivity for manufacturing as a whole was 20 percent below that in the United States.[2] The differential was greatest for non-durables, at 39 percent, compared to 2-6 percent in the durable goods sector. The declining growth trend during 1976 and 1977 in the primary, trade, financial, and service sectors was to a degree a normal adjustment to the very high growth rates during the first half of the decade. Contributing to the negative impact on investment in the primary sector since 1974 was the uncertainty and escalation of taxes on resource products.

Canada's relatively large business capital expenditures are usually rationalized on the basis of the importance of the capital intensive resource and energy industries in the economy, together with the heavy capital expenditures associated with providing the transportation and communication links for a country settled in a narrow corridor five thousand miles in length. What is not as widely appreciated is that Canada's manufacturing sector, which is concentrated in Ontario and Québec and is not of an unusually capital intensive nature, employs considerably more capital per unit of output than the manufacturing sector in the United States.

The recent Conference Board in Canada study of productivity indicated that capital per worker employed in manufacturing was 61 percent greater than in the United States. At the same time, relative productivity levels in a sampling of durable and non-durable goods industries indicates that, while there has been a narrowing of the gap with the United States, Canadian productivity in 1974 was on average only 68 percent of U.S. levels for non-durable goods and 94 percent for durable goods, as illustrated in Table 3. As Table A5 shows, value added in 1972 in the manufacturing sector per dollar of gross capital stock was estimated at 0.521 in Canada, compared to 0.969 in the United States.

[2] *Assessing Trends in Canada's Competitive Position; The Case of Canada and the United States* (Conference Board in Canada, Nov. 1977).

Table 3

Estimated Relative Productivity Levels in Canada and the United States (percentages in 1967 and 1974, by major industry groups)

	Canadian prices: U.S. = 100	
	1967	1974
Non-durable goods	53	68
Food processing	72	69
Textile, clothing, knitting	70	83
Paper products	76	77
Petroleum refining	37	20
Miscellaneous	44	53
Durable goods		
Wood products	111	117
Metal products	70	83
Motors, vehicles, and parts	77	100
Miscellaneous	60	68
Total sample	62	77

Over the past twenty-five years the Canadian economy has grown at a faster and more consistent pace than that of the United States. However, an analysis of the Canadian growth factors shows that the faster pace of labour-force growth, rather than increased productivity derived from a more intensive and efficient application of capital, has been responsible for the superior Canadian performance. Later in this report attention will be given to the fact that, with labour-force growth forecast to decline steadily over the next ten years, particularly in the second half of the decade, the maintenance of a rate of economic expansion close to the current potential of 5 percent will depend crucially on an increasing volume of capital expenditures to improve productivity, particularly in the manufacturing sector.

Principal Political, Economic and Financial Trends Influencing the Volume and Timing of Capital Investment

The political environment

The concept of a favourable or unfavourable political environment for business investment is a qualitative one and embraces a wide range of political ideologies. At the extreme, an unfavourable assessment of the environment results in a decision not to invest. Through the gradations from extremely unfavourable to extremely favourable, the political assessment is expressed as a risk factor to be compensated for by the expected rate of return on the investment, or guarantees from a home government. It is not surprising therefore to find business investment being made over the full range of political risks. Throughout its history Canada has ranked high in any international assessment of countries offering minimal political risk. While there is no single universally accepted set of criteria defining an acceptable or unacceptable political environment for purposes of business investment decision-making, a number of conditions or characteristics have survived the test of time as critical inputs. Not necessarily in order of importance, they are: political stability – an orderly procedure of forming a government with sufficient authority to uphold the laws of the land and the sanctity of contracts and private property, to maintain peace and good order internally and to defend the country from outside aggression – and a government that through its legislation and attitude recognizes the business community as an indispensable contributor to the over-all growth and prosperity of the country. Just as nature abhors a vacuum, businessmen abhor uncertainty about political conditions during the pay-back period of a prospective investment. Thus the concept of political stability makes provision not only for an orderly process of electing an effective government dedicated to the rule of law and sanctity of contracts but also for a consistently fair and equitable approach to legislative changes that alter the economic or financial environment in which business operates.

The economic and financial environment

The principal economic and financial trends that influence the volume of new business investment include the expected market demand for the product and the anticipated relationship between the product price and the cost of the principal production inputs – labour, materials, financing, and corporate taxes. Supplementary factors influencing investment decision include the current rate and external value of the currency over the pay-back period, and the competitive position of the product in both domestic and foreign markets.

In a period such as the early 1960s, characterized by relatively low inflation rates and succeeding years of well-balanced vigorous growth, and a favourable cost-price relationship with foreign competition, including an undervalued external rate for the Canadian dollar, the business risks in a decision to increase investment were minimal. As will be discussed in detail later, the risk in deciding to increase business investment at the present time has risen substantially. While the weighting given the various economic and financial factors influencing an investment decision vary with the nature of the industry. Financial costs, for example, generally weigh more heavily on utilities than on manufacturing. The three most important factors are: the potential market demand for the product, the relationship between the anticipated increase in productivity resulting from the new investment compared to the trend in labour costs, and the prospect of recovering, through product pricing, the initial investment and subsequent operating costs, together with a cash flow return on the investment sufficient to finance eventual replacement costs and pay a competitive rate of return to the capital, fixed and equity, invested in the business.

Corporate objectives in undertaking a capital investment program

Capital investment potential has become appreciably more important and critical in determining the future growth and profitability of a company. Rising costs and increasing uncertainty about the growth of markets and product prices have augmented the risks associated with any capital investment. Traditionally, the objective of capital investment has been to maximize the present value of the company. The key elements in achieving this goal are maximizing the return on investment, earnings, and sales, minimizing costs, and stimulating an increase in market share.

More recently, single-minded devotion to maximizing owners' equity has been directed through legislation and self-interest to take account of social objectives, such as additional pollution control and the elimination of health and accident hazards. The recent inflationary period and the associated rapid escalation of production and expansion costs have focused attention on cost reduction as a major objective in capital planning. In Canada particularly, the high and rising cost of pollution control and energy, which has accelerated the rate of obsolescence of older plant and equipment and raised the economic rate of plant and equipment utilization, can be expected to stimulate capital spending on machinery and equipment in the intermediate future.

Companies vary significantly in the sophistication they apply in appraising and planning new capital investment. While considerable progress has been made in extending the horizon of investment budget planning to cover a five-year period, in times of uncertainty that horizon shortens perceptibly. The most consistent outlet for new capital investment has been the expansion and modernization of existing plants, particularly in the manufacturing sector where regional plant managers have a significant influence on capital spending decisions. This bias can at times lock a company into slow-growing regions where the opportunity for expansion in new products or markets is limited. Originally applied to operational budgets, the concept of zero budgeting which forces management to appraise not only the additional yearly demand for funds by the operational divisions but also the total expenditure budget of the division, can be applied to capital budgeting as well, to permit an appraisal of the economic viability of additional capital expenditures on existing plant and equipment.

In perhaps a majority of companies, the initial screening of investment proposals occurs by comparing the calculated investment return from the proposed investment with a so-called hurdle or cut-off rate. The principal concern in setting such a rate is the cost to the company of both current and long-term capital. Some companies set the rate at some notional objective for a long-range rate of return on employed assets. The cost of capital is usually calculated as a weighted average of the cost of the preferred mix of debt and equity capital.

Of a variety of formulas existing to establish the investment return from a capital expenditure proposal, the two most widely used are the discounted cash flow rate of return and the less sophisticated pay-back method. The latter measures the time required for the cumulative receipts from a project to recover the expenditures required to finance the project. Its chief weakness is a failure to measure the time value of money and the value of revenues that may be earned by the project beyond the pay-back period. Its use tends to increase in periods of economic or market uncertainty or when the product has weak patent or monopoly protection and is subject to frequent shifts in consumer acceptance, such as ‘fad’ or ‘fashion items.’ The discounted cash flow rate of return, by determining the discount rate which equates the present value of the expected cash receipts from the investment with the present value of the expenditures required to make the investment, extends the pay-back concept to take account both of the time value of the money and the cash flow beyond the pay-back period expected over its economic life. If the discount rate exceeds the hurdle or notional rate of return, it has passed the first test of financial viability.

Other less widely used methods of financial evaluation include the return on investment, calculated by dividing the average annual receipts from the investment by the total cost of the investment and the net present value method, using the hurdle rate of discount to calculate the difference between the present value of outlays and receipts on a proposed investment. If the present value of receipts exceeds that of outlays, the project passes the net present value test. More sophisticated methods of financial appraisal are used by large capital intensive utility and resource development companies, but with the same major objective of evaluating the most probable rate of investment return.

Rates of return are also appraised in terms of the potential risks involved in the project. These risks might include variations in the forecast level of sales and sale prices, in plant productivity, and in the costs of labour, financing, and construction. When, as at present, unusual uncertainty prevails about some of these factors (i.e. the risk element is high), the number of projects capable of passing the financial evaluation test, after rates of expected return have been deflated to reflect the high risk factor, is greatly reduced. One common method of assessing the risk factor is to make several estimates of profitability, based on pessimistic, optimistic, and most likely projections.

A more sophisticated appraisal of risk involves the use of probabilistic analysis in which key input components are identified. The maximum amount these components are likely to vary during the economic life of the project is determined, the key input variables are variously combined, and a probability distribution reflecting the most likely combination of the results is prepared. A similar but more detailed method of evaluating risk is the use of sensitivity analysis. The discounted cash flow rate of return is tested for sensitivity to the variability of a selected input variable over a wide range of values, all other input components being held at the original value used in calculating the original discounted cash flow rate. The process is repeated for all the input components. This type of analysis identifies the input component or components, variations in which have the greatest impact on the rate of return, and allows management to reappraise forecasts of the critical components. If for example they are considered to be unreliable, the project may be scrapped, unless the investment return, after adjusting for a pessimistic forecast of the critical variables, continues to match or exceed the hurdle rate of return.

This survey of the criteria used in varying degrees by business management in making capital investment decisions indicates that a good or bad forecast performance for a single input cost or cash flow component cannot generally be used by industry as a signal to approve or turn down a capital investment proposal. Each industry differs in its sensitivity to forecast trends in a particular variable or combination of variables. Capital intensive industries such as resource developers and utility and communication companies are particularly sensitive to construction costs, to the cost and availability of financing, and to their ability to recover these costs through future stability or appropriate upward adjustment in their product prices. Export-orientated industries whose product prices are determined in world markets are particularly sensitive to trends in prices and taxation and to fluctuations in the external value of the Canadian dollar. On the other hand in small, labour intensive manufacturing and service industries the critical variables are more likely to be the need for expanding markets or market share and the trend in labour costs. The following section reviews current trends in the principal variables that figure prominently in the decision-making process for capital investments.

The current climate for business investment

POLITICAL UNCERTAINTY

There are two dimensions to this issue of political uncertainty as it affects business confidence and inhibits risk-taking and forward planning. Its most dramatic and unsettling manifestation was the election of a party in Québec dedicated to political separation from Canada. In the view of many, such a separation means the economic dismemberment of Canada. Uncertainty about the outcome will persist for at least the next two or three years, and will impede a resurgence in business optimism and dynamism to the degree necessary to pull the economy out of its current sluggishness. However, even if, as the majority of Canadians hope and believe, Québec rejects separation, forces for significant change in our constitutional arrangements have been put in motion. Although in the long run these forces for change may well result in a stronger Canada, during the intermediate term they will prolong the highest level of political uncertainty that business has faced since the second World War.

The other dimension of political uncertainty, less dramatic though potentially as damaging to business confidence, is the increasing frequency of government intervention in the activities of the private sector. These interventions, if not simply capricious, demonstrate a lack of understanding of or commitment to, the key role that a dynamic business sector plays in generating the jobs and incomes required to support a prosperous egalitarian society. While it is true that the pressure for intervention originated in part from consumers and businessmen, government initiatives played a dominant role. There was a lack of government leadership in limiting demands on the economy which were clearly beyond its capacity to supply in a non-inflationary manner. The climate of business confidence was especially polluted by frequent regulatory and tax changes which absorbed the time of managerial talent and made forward planning difficult and risky. The pace of intervention increased significantly under the thrust of policy initiatives to promote greater economic autonomy, the escalation of demand-pull and cost-push inflation, and the quantum jump in energy prices. These developments led to the creation of the Anti-Inflation Board and the Foreign Investment Review Act, to government control over oil and gas prices, and to internecine warfare between some provinces and the federal government over the taxing of oil and mineral resources. Business confidence, damaged by the escalation in government intervention, has been further undermined by the slow pace of economic recovery, low corporate profitability, and excess industrial capacity.

Recently there have been encouraging signs of an improvement in the political climate affecting business. The federal government has publicly acknowledged the desirability of holding percentage increases in its expenditures below that of the economy as a whole. Provincial governments have also restrained increases in their expenditures. Though more adjustments are required, for the mining industry in particular, the worst excesses in the tax treatment of energy and other resource products have been removed. The federal government's May budget lightened the tax burden on the business and investment community, and earlier fears that continuation of a significant degree of government intervention in price and wage income determination following the phase-out of the AIB have largely dissipated. The one area where current trends continue to erode business confidence is labour-management negotiations, where confrontation still prevails, instead of a more balanced approach conducted realistically to avoid inflationary pressures and a loss of competitiveness.

THE SLUGGISH PACE OF ECONOMIC RECOVERY

Attention has already been given to the importance on business investment planning of an optimistic appraisal of market growth. Current sluggishness in business capital spending is due to uncertainty about increases in market sales and to the low utilization level of existing productive capacity. The federal government's policy of gradualism in guiding the economy through a period of recovery from a world-wide recession and an unacceptably high and stubborn inflation rate has prolonged the period of slow growth. Businessmen are not convinced that fundamental structural and cost problems endemic in the economy are being solved. The projected rate of domestic economic growth, at least over the next two years, will not stimulate more than a modest increase in business capital spending and few manufacturing industries will experience strong pressure for additional investment because of capacity utilization. One sector of the economy where such pressure may surface over the intermediate period is export-oriented industries, which will benefit most in terms of sales volume, as well as profitability, from a discount in the external value of the Canadian dollar.

However the rate of growth in world demand and the trend in world commodity prices are more important determinants of export volume, profitability, and expanded investment plans than a discount dollar. Neither world demand nor prices are likely to make strong gains in the next year or two. The Canadian dollar would have to decline to a discount with the U.S. dollar of at least 15 percent to provide enough increase in volume or profitability to stimulate any significantly enlarged investment. As discussed later, unless Québec separates from Canada such a rate of discount is not expected to develop. Furthermore, the large influence of inflows of capital in supporting the exchange value of the dollar – inflows largely initiated by public Canadian borrowers not directly influenced in their borrowing requirements by Canada's deteriorating international competitive position – makes investment planning based on any particular discount value for the Canadian dollar hazardous.

Capital investment in the energy sector moves at a different pace, because of not only the long lead time required to bring new supplies to market but also a more confident view of future demand. Financial constraints, rather than market uncertainty arising from prospective slow economic growth, may slow the rate of increase in investment in hydroelectric projects over the intermediate term but not significantly. Likely to suffer most from the current economic slump is the commercial and institutional sector, where recent large additions to facilities have resulted in a temporarily over-built condition. It is estimated that capacity utilization rates in this sector of the construction industry are 65 percent or lower.

INADEQUATE RATE OF RETURN ON NEW INVESTMENT

For an increasing number of industries the cost of investing in new plant and equipment, including financing costs, is currently well above the forecast financial returns from such investment based on conservative expectations of future product prices and productivity increases.

The extent to which the weighted average cost of financial capital has increased more than the rate of return on assets employed by the Canadian manufacturing sector is indicated in Table 4.

Table 4

Capital Costs and Rates of Return: Canadian Manufacturing, 1972-76

	Rate of return on assets (%)	Weighted average cost of capital (%)
1972	7.02	5.51
1973	8.71	6.42
1974	9.62	9.42
1975	8.30	10.34
1976	7.72	9.41

A similar trend is observable in the United States as Figure A2 indicates. Since the early 1960s the cost of financial capital has increased roughly 2.3 percentage points more than rates of return on investment. The deteriorating trend in rates of return relative to the cost of capital in the financial position of Canadian manufacturing industries is further illustrated in Tables A24 and A25.

It can be argued that it is the ratio of current investment costs to future rather than current market prices that is critical. This is probably true when the outlook for market growth and pricing is clearly optimistic, as it was during the 1960s and early 1970s. However, considering current uncertainty and pessimism about future trends, an unfavourable ratio of costs to current market product prices is likely to result in a postponement of investment or a shift to a country, such as the United States, where the cost-price relationship is more favourable.

In a recent U.S. study based on an analysis of the steel, aluminum and forest product industries, – believed to be typical over a broad spectrum of American industry – it was shown that there had been a considerable improvement in the last three years in the investment cost-market price ratio.[1] In spite of this increased incentive for capital investment, there has been a slow rise in actual expenditures, reflecting the carry-over of pessimism generated by the depth of the 1975 recession, the acceleration in energy and pollution control costs, and uncertainty regarding continuance of an uptrend in market demand. Faced with all these uncertainties, plus the political uncertainty, Canadian industry does not enjoy the U.S. vision of an improving cost-market price trend. The one positive advantage Canadian industry has recently acquired is the approximate 10 percent devaluation of the Canadian dollar relative to the U.S. dollar. However, as indicated earlier, the stimulus to investment of a 10 percent dollar devaluation, while positive, is marginal even when there is certainty that the devaluation will persist over an extended period. There is no such certainty currently. In fact, there is some belief that heavy external borrowing to finance large energy and resource projects may in the near future cut the current rate of discount substantially.

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[1] Barry Bosworth, *Capacity Creation in Basic Materials Industries* (Brookings Paper on Economic Activity, 1976) 336.

LOW CAPACITY UTILIZATION RATES

The over-all rate of industrial capacity utilization reached its lowest level during the 1970s at 83.3 percent in the fourth quarter of 1976. This compares with rates of close to 95 percent during the boom years of 1973-4. Preliminary evidence suggests that a modest rise in the rate occurred in 1977 to just over 85 percent. As could be expected, considerable variation in rates exists among different industrial sectors. Current capacity utilization rates for major industrial sectors compared to peak and low rates during the 1970s are listed in Table A6. The principal fact revealed by these figures is that total industrial capacity utilization rates are currently at or close to the lowest levels experienced during the 1970s, and on average 12 percent below highs established during 1973 and 1974. Of the seventeen manufacturing sectors listed, some are operating at new capacity utilization lows and at less than 5 percent above previous lows. Capacity utilization rates are biased downward to some degree in the energy and chemical sectors by the inclusion in the capacity figures of current capital expenditures on long lead projects before the project comes into production.

The Bank of Canada has constructed an industrial capacity utilization series that excludes energy-related industries, revealing more clearly the relationship between increases in output and capacity additions. (see Figure A1).

It is interesting to contrast the relationship between the trend in output and additions to capacity in the two periods since 1960 (early 1966 and 1974) when commodity utilization ratio peaked at or slightly above 95 percent. In the earlier period strong percentage gains in output commencing in 1962 resulted in large percentage increases in capacity in 1965-6. Lower rates of output in succeeding years, combined with the earlier large additions to capacity, dropped capacity utilization rates from 97 percent in January

1966 to around 87 percent at the end of 1970. Increasing rates of output in the period 1970-3 drove capacity utilization rates to 95 percent by the end of 1973. In contrast to the earlier period when additions to capacity responded strongly to the high capacity utilization rates, the response has been sluggish, reflecting declining production rates as recessionary inflation took hold and business confidence waned.

In summary, low capital utilization rates, now as in the past, inhibit any early rapid escalation in capital spending to expand capacity. Past experience suggests that the relationship between capacity utilization rates and new investment is non-linear in the sense that below a critical level of capacity utilization, around 85 percent, increases in utilization rates have a minimum short-term effect in stimulating capital spending. In a recent survey of Canadian business attitudes toward capital investment conducted by the Conference Board in Canada, 21.3 percent of respondents cited excess capacity as adversely affecting their planned investments in Canada. This compares with 49.4 percent who cited weak market demand as a major deterrent and 20 percent who mentioned escalating labour costs. Industries citing excess capacity as a significant deterrent to capital spending included forestry products, 33.3 percent; commercial services, 27.3 percent; oil, gas, and chemicals, 34.2 percent; and transport and storage 42.9 percent.

An important tool in the analysis of prospective investment trends is the trend in the ratio of the capital required to produce a given level of output, i.e. the capital/output ratio. For the economy as a whole, the capital/output ratio is influenced by two separate factors: first, an increasing or decreasing use of capital in relation to output, assuming a constant rate of growth for all production sectors; second, shifts in the growth rate of production sectors toward those whose capital/output ratios are either increasing or declining. Figure A3 illustrates the over-all trend in the capital/output ratio for Canada and the United States. (The broken line for the U.S. trend includes an adjustment to reflect fluctuations in the capacity utilization rate).

A detailed analysis of the relatively flat trend in Canada's capital/output ratio since 1966 indicates that a small over-all declining trend in the capital/output ratio of major production sectors has been offset by a faster rate of growth in the production sectors whose capital/output ratios are increasing. Figure A3 supports to a degree an increase in the U.S. capital/output ratio; Canadian capital/output ratios, following a decline in the early 1960s, have remained relatively stable since that time. An analysis by sectors (Table A7) reveals significant declining ratios in the transportation and utility industries, increasing ratios in the service, finance, forestry, mining, and fishing industries, and stable ratios in the manufacturing, trade, agriculture, and construction industries. It is anticipated that over the next five or ten years, Canadian capital/output ratios will rise. As Canadian resource development moves further north and exploits lower grade ores, capital costs will increase relative to output. This will also occur in electrical generation as transmission costs increase and nuclear energy plants replace hydro sites. Spurred by energy conservation and the rehabilitation of facilities the decline in the transportation sector is likely to be halted or even reversed as railroads are upgraded to handle an increased volume of traffic, both freight and passenger.

The trend in capital/output ratios is also influenced by fluctuations in the rate at which old facilities are scrapped and by extensions in productive capacity managed with only modest increases in new capital investment. These effects are illustrated in a recent U.S. study (Table 5) which compares the rise in constant dollar investment expenditures with the per-ton increase in capacity for the steel and paper industries.[2] The large increase in investment expenditures per ton of new capacity in the steel industry reflected the large scrappage of obsolete open hearth operations and their replacement with new technological processes that greatly increased productivity with only a relatively small increase in over-all capacity. On the other hand the declining ratio of capital expenditures per ton of increased capacity in the paper industry reflected the ability of the industry to increase capacity by speeding up machines, adding extra shifts, and the like, in lieu of large new capital expenditures. While there is further scope over the next few years for the Canadian paper industry to produce more from existing facilities, by the early 1980s increased production will depend primarily on additional capital investment.

Table 5

Capital expenditures per ton increase in capacity

	Steel($)	Paper and Paperboard($)
1955-60	343	378
1966-70	3460	440
1971-75	6500	354

However, the most important factors supporting a rising trend in capital/output ratios are the increase in energy prices and the imposition of legislated pollution controls. Higher energy prices will tend to increase capital/output ratios by greatly increasing high-cost capital investment in new energy projects to increase Canadian self-sufficiency in energy. Recent estimates indicate a prospective capital investment of around $185 billion in 1971 dollars over the next fifteen years. Higher energy prices will also, along with pollution controls, greatly accelerate the obsolescence of facilities that are both inefficient and large polluters; these two characteristics tend to combine in certain industries, such as primary metal extraction, refining industrial chemicals, petroleum refining, and pulp and paper. The Canadian economy relies heavily on industries that involve a breakdown in a molecular structure and consequently produce a high level of residual pollutant.

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[2] *Ibid.*, 312.

The quadrupled rise in oil prices and the more stringent legislative restraints against pollution have broken a relatively smooth process of adjustment to technological change and price trends. Continuous technological improvement has enabled new plants and equipment to be more productive while economizing on energy and producing less pollution. This higher rate of productivity allowed the new plants to absorb moderately rising labour and material costs or to lower prices and still operate profitably. Therefore product prices for the industry tended to be set by the newest additions to the capital stock. Older plants will continue in use as long as variable costs are covered, and where this is no longer possible they will be retired.

High energy and pollution control costs have greatly reduced the profitability of older plants and hastened their closures. The real crunch, however, is that accelerated obsolescence has outpaced technological advances in economizing on energy and reducing pollution. This is not surprising, because most of the new machinery and equipment currently available was designed and engineered before energy costs and pollution controls became a critical consideration. As a result, high-cost, new plants often require substantial increases in product prices to operate profitably, increases which are difficult to achieve in slow-growing world markets. It will take several years for new machinery, equipment, and industrial processes to be developed in enough volume to economize on the high-cost energy and pollution controls; this will restrain to a degree the expansion in capital spending over the short term.

In summary, while low capacity utilization rates over a broad range of Canadian production sectors are currently restraining an early strong revival in business capital spending, the prospect of rising capital/output ratios in certain sectors that are expected to expand faster than the economy as a whole (for example, energy-related industries), together with an expected reversal in the historically declining capital/output ratio in the utility and transportation industries, suggest that, over the five-year period starting in 1970, business capital spending will be increasing as a percentage of GNP. Some current estimates of the magnitude of the acceleration in capital spending and the degree to which domestic savings will be available to finance these expenditures will be discussed later.

GOVERNMENT INTERVENTION IN BUSINESS DECISIONS

Federal and provincial governments may influence the environment in ways that either hinder or stimulate business investment. The principal distinguishing characteristic between capital investment expenditure and consumption expenditure is the element of risk involved; this risk arises from the greater degree of uncertainty about realizing the expected utility gains from capital investment. Part of the uncertainty stems from the longer time interval between the outlay and the realization of gain. Thus, even if government intervention is reduced to a minimum, there is still a significant risk attached to capital investment. This risk will be significantly increased by uncertainty caused by frequent, large-scale government interventions in the principal areas that enter into capital investment decision-making. Business can adapt to a wide range of variation in the degree of government involvement in the economy if there is some certainty that conditions of pay-back have not altered radically from those existing when investment was made. But when government intervention involves frequent changes in the rules of the game, uncertainty increases, the risk level rises, and the acceptable rate of return on new investment increases to offset the additional risk. This process shortens the list of potential new investments that will be undertaken.

In a more direct way governments affect the level of capital investment by influencing rates of return through changes in taxes, depreciation rules, interest rate policy, safety regulations, pollution controls, income policies, and the like. In the Conference Board survey of business attitudes, 58.6 percent of business respondents reported that government policies were having an adverse effect on their capital investment planning.

It is sometimes argued that high energy and pollution control costs will shift the pattern of economic development away from capital intensive industries towards the more labour intensive service industries. In a relatively self-contained economy such as that of the United States, with both a broadly diversified industrial structure and a large domestic market, the impact of such a trend could be absorbed with minimal impact on over-all economic or income growth. Since Canada is heavily dependent on a buoyant level of exports, however, the bulk of which are produced by capital intensive resource or manufacturing industries, and since its service industry makes only a marginal contribution to the volume of net exports, such a shift from capital to labour intensive activities cannot be realized without incurring some loss in economic growth and the standard of living. (This conclusion is strengthened by the fact that Canadian wage rates are among the highest in the world and act as a deterrent, rather than a stimulus, to the more intensive use of labour, particularly in the export sector.) This is not to deny that there is a potential for increasing export earnings in such service industries as banking, insurance, engineering, and tourism but rather to emphasize that this potential will develop too slowly to offset the decline in exports that will occur if our capital intensive industries, through neglect or punitive tax or regulatory treatment, are allowed to deteriorate.

The imposition of wage and price controls by the government in 1975 clearly raised the level of business uncertainty and inhibited new capital investment. In the Conference Board survey 25 percent of the respondents reported a decline in their investment plans as a result of the controls. While marginal in comparison with the restraint on capital spending, uncertainty over the timing and format of decontrol and over the behaviour of wages and prices following removal of controls acted as a restraining influence on forward investment planning. The announced termination of controls early in 1978 has removed uncertainty about timing and format, but misgivings about the behaviour of wages and prices in the decontrol period still remain.

In the view of the business community, perhaps the most discouraging features of the controls have been the apparent lack of progress made towards restructuring the industrial sector on a more competitive domestic and international basis and the failure to find a more realistic and less damaging format than current confrontation policies in labour-management relations. In both these areas the initiative for improvement has been left too much to governments. Generally, the federal government is perceived as having approached such problems with confidence in its own ability to manage the economy and an innate suspicion about the competency of the market place to find solutions that are both workable and equitable. The biggest challenge facing business and labour leadership in the years ahead is to assume the initiative in dealing with these problems and encourage government to withdraw to a less activist role in detailed control of business and labour activities.

In the eyes of many members of the business community, the proposals to revise Part II of the Competition Act, Bill C-42 exemplify some of the difficulties faced by the private sector in its relations with government. A critique of the provisions of Bill C-42 is not within the scope of this report. Two points are noteworthy however. First, the process of revising competition policy in Canada has now been underway for many years. The uncertainty associated with the revision process has continued for an unnecessarily long period of time. In addition, the open-ended discretionary powers contained in certain provisions of the Bill will leave the rules of the game very uncertain in a number of areas even if the Bill is approved, thereby extending uncertainty about the impact of the Bill well into the future. Secondly, some features of the Bill are seen as being excessively *dirigiste* in approach, as distinct from relying more heavily upon the discipline of the market place by prohibiting artificial restraints not based on superior economic performance and "by upgrading incentives and strengthening pressures for adjustment so that questions of innovation, economies of scale, specialization of firms, rates of growth and the like could largely be left to dynamic marketlike arrangements".[3]

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[3] A statement by Dr . L.A. Skeoch on the Dynamic Change Report and Bill C42.

There is little doubt that this country does need better legislation than it now has on monopoly and mergers in order to foster a more competitive economy. Some of the concerns expressed about the current Bill no doubt reflect special pleading. Nor is it reasonable to expect the government to come up with a Bill that will effectively promote more competition and at the same time leave all private interests undisturbed. What is now needed in the interest of reducing business uncertainty is a speedy legislative resolution of this issue that sets out the rules of the game as clearly as possible and relies as much as is practical upon the play of market forces.

EFFECTS ON INFLATION IN REDUCING CORPORATE CASH FLOW

Considerable attention has been directed recently to the impact of inflation on the financial position of Canadian business. While all studies agree that the impact is sufficiently negative to call for some remedial action, there are, as might be expected, variations in the estimates of cash flow losses to industry as a result of the failure of current accounting procedures to adjust adequately to the effect of inflation. The two most recent exhaustive Canadian studies of this topic are the Report of the Ontario Committee on Inflation Accounting issued in June 1977, and Discussion Paper No. 72, *Inflation, its financial impact on business in Canada,* issued in January 1977 by the Economic Council of Canada. The following comments will focus principally on the negative impact of inflation on the capital investment decision-making process. Apart from specific financial effects of inflation on corporate cash flow, detailed below, a strong inflationary environment creates an increasingly uncertain milieu for business investment decisions. This uncertainty focuses on the prospects of recapturing, through future selling price and productivity increases, the high current costs of construction, capital equipment, and financing – the result of high inflation rates in previous years. While most economic forecasters see little hope of reducing inflation rates below 5-6 percent over the next decade, there is clearly some possibility of this occurring. No matter how desirable or even necessary a lower rate of inflation is in re-establishing a strong, well-balanced rate of economic growth over the longer term, a sharply decelerating rate of inflation over the intermediate term would threaten the profitability of newly installed high-cost facilities financed with high-cost, fixed-income debt.

In addition to fears of experiencing a deflationary period during the pay-back of a new capital investment, businessmen worry about a continuing rate of inflation in Canada well above that occurring in the economies of our major trade competitors. In that situation selling prices for our major exports, which are set in the world market, and import prices on products which compete in the domestic market may well be held at levels lower than required to earn a hurdle rate of investment return on capital investment costs that reflect the higher Canadian inflation rate. The relief provided by a persistent decline in the external value of the Canadian dollar can only be temporary and in the end counter-productive as the higher cost of imports strengthens domestic inflationary pressures.

The negative impact of inflation on corporate cash flow and indirectly on capital investment decisions arises principally from the use of accounting methods in calculating corporate profits that fail to recognize the large discrepancy that develops between historical and replacement costs for inventories and capital assets in a strong inflationary environment. As a result, corporate taxes have been paid on illusory profits resulting in capital rather than income payments to government taxing authorities. One study has estimated that in 1976, for all Canadian corporations, corporate profits were overstated by $6 billion, resulting in excessive tax payments of roughly $3.7 billion in that year.[4]

Another study estimated that the overpayment of taxes in 1974 arising solely from the inclusion in corporate profits of illusory gains on inventories amounted to between $1.5 and $2 billion.[5] Industries hardest hit by the taxation of illusory inventory profits include food and beverages, leather products, wood, furniture, machinery, metal fabrication, and retail and wholesale trade. In partial recognition of this, the federal and Ontario governments passed legislation allowing a reduction in calculating business income of 3 percent of the opening value of qualifying inventory. The estimated tax savings in fiscal year 1977-8 are estimated at $275 million at the federal level and an additional $40 million for Ontario corporations. The degree of tax relief provided by this legislation varies considerably among companies, depending on the volume of inventories carried, the degree to which their inventories are exposed to inflation effects, and the manner in which their inventories are normally financed, by internal funds or external borrowing.

It would appear that companies in the merchandising, transportation, utility, food and beverage, and textile industries will benefit most in tax relief from this measure. The use of historical rather than replacement cost as the base on which capital cost allowances are calculated has also led to an overstatement of corporate profits and consequent overpayment of corporate taxes. The degree of overpayment has been estimated for 1975 at $1.6 billion.[6] However, as pointed out by both the Ontario government and Economic Council studies, liberalization of capital cost allowances in recent years, together with the introduction of the 5 percent investment tax credit, has more than offset the shortfall in tax allowance on depreciable assets up to 1975. Transportation, rubber, and paper and allied industries are the principal ones for which liberalized depreciation allowances failed to compensate for the widening gap between historical and replacement costs of fixed assets.

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[4] *Report of the Ontario Committee on Inflation Accounting*, 68.

[5] Glenn P. Jenkins, *Inflation, its Financial Impact on Business in Canada* (Ottawa; Economic Council of Canada, 1977).

[6] *Ibid.*

Althought the negative impact of inflation has been substantially reduced through higher depreciation rates this does not warrant complacency about the situation in the future. More liberal depreciation rules were introduced to stimulate additional investment because of the negative impact of inflation on corporate cash flow. Currently, a positive degree of stimulation above a purely defensive position is clearly needed. Also, in the intermediate period ahead, given relatively low levels of capital spending, the under-depreciated historical cost base on which the liberalized cost allowances are applied may become so small relative to the asset base valued at replacement prices that current liberal depreciation allowances will fall below amounts necessary to offset the inflation-induced under-depreciation of fixed assets.

In an inflationary period, companies are required to hold an increasing amount of cash balances to transact a constant volume of business, which means either a reduction in corporate cash flow available for new investment or increased cost if funds are borrowed. In 1973 the cost to non-financial industries of holding increased cash balances was estimated at roughly $230 million; given the steep rise in inflation since then the current annual cost can conservatively be estimated as $350 million.

As well as reducing the volume of corporate cash flow available to finance new investment, inflation also raises the nominal cost of borrowed funds, particularly in long-term form. Although the mechanism through which inflation increases long-term bond yields is imperfectly understood, there is a consensus that higher rates of inflation increase nominal bond yields on close to a one-to-one basis. The rationale for this consensus is the distinction made between nominal (market) rates of interest and real (constant dollar) rates. The real interest rate is the expected real increase in the purchasing power of funds loaned in the market. If we assume a lender is satisfied to receive a 4 percent annual increase in his ability to purchase a given volume of goods and services and he expects that inflation will average 6 percent over the term of his loan, he will wish to receive a market rate of interest of 10 percent to ensure he receives a 4 percent annual increase in real purchasing power. If his expected rate of inflation is 8 percent, rather than 6 percent, he will wish to receive a market interest rate of 12 percent rather than 10 percent. If tax considerations are taken into account, market rates would have to rise marginally more than the expected inflation rate in order to maintain a level real rate of return for the lender. In fact, over the last year or two, market interest rates have risen less than necessary to maintain a constant real rate of return to the lender; this, in time, lowers the real cost of money to the borrower. In spite of this, inflation and the historically high market interest rates it generates have had some negative impact on capital investment decision-making.

No matter how illogical the approach may seem to the economic purist, in practice, it is the *market* not the *real* rate of interest that business management uses to measure the financial cost to be included with other capital expenditure costs in calculating the hurdle rate of return on a new investment. The market rate of interest also measures the interest burden on the company which enters into the calculation of the degree to which annual earnings cover interest payments, a key provision in bond indentures. During an inflationary period savers are inclined to invest in highly liquid short-term securities, thus depriving the long-term market, the area most appropriate for the financing of capital projects, of funds.

In recent years an increasing number of companies have been unable to finance capital expansion through the bond route, because the additional interest payments would dilute the earnings average below the minimum specified in their outstanding bond indentures.

Finally, in an inflationary environment where high secure income has investment preference over low dividend income and a reliance on capital gains, high interest rates have attracted investment funds from the equity markets. As a result, few companies have been able to raise equity funds at an acceptable financial cost. The increase in the debt/equity ratio for Canadian industrial companies is shown in Table A25 and Figure A8. However, to put financing costs in perspective, U.S. studies indicate that whereas a 1 percent increase in output will, over a two-year period, increase investment by 1.5 percent, a 1 percent increase in interest costs leads to a decrease in investment of 0.5 percent.[7] Moreover, in the Conference Board in Canada Survey of Business Attitudes, only 17 percent of respondents cited high interest rates as adversely affecting planned investment, compared to 67 percent who mentioned weak market demand and 50 percent who pointed to government policies.

HIGH AND UNCOMPETITIVE CONSTRUCTION AND EQUIPMENT COSTS

Escalation in construction costs in recent years has greatly increased the risk, complicated the planning, and reduced prospects of realizing calculated rates of return on new capital projects, particularly those with long lead times to completion. Large cost overruns on recent projects have made management cautious about undertaking such projects. For some industries, even

[7] E.S. Grossman, *A Guide to the Determinants of Capital Investment* (The Conference Board) 38.

original cost estimates require a large increase in product prices to make the capital investment an economically viable one (see Table A8: Greenfield Newsprint Mill). These figures indicate that an increase in the price of newsprint of around 50 percent would be required to make such an investment profitable.

Another problem which has become more critical for Canadian capital investment is the higher cost of constructing and operating new industrial facilities in Canada relative to other countries, particularly the United States. The following examples give some idea of the differential in construction costs in some major cities in Canada and the United States. In June 1977, for a 40,000 square foot industrial building (Toronto = 100):

Montreal 103.5, Calgary 106.1, Vancouver 110.9, St. John's 117.0;
Raleigh NC 73.1, Miami 98.3, Chicago 104.2, Kansas City 105.2,
Los Angeles 112.4, Detroit 114.8.

Indexes of the cost differential in building a petrochemical plant in the United States or Canada (U.S. Gulf Coast = 100):

Percentage contribution net increase

		Labour	Material	Engineering
Sarnia	120	14	4	2
Montreal	130	23	5	2
Calgary	135	26	5	4

Although labour costs account for about one-third of the cost of the new plant, they account for roughly two-thirds of the Canadian cost disadvantage. In specific cases, the cost of constructing industrial or commercial facilities in Canada, compared with the United States, has reached levels 50 percent higher or more because of labour and management inefficiencies and strike action.

Equipment costs are also higher in Canada, around 25 percent, partly because of higher labour costs and import tariffs, since Canada imports from 50 to 60 percent of its machinery and equipment. In a recent survey by the Machinery and Equipment Manufacturers' Association it was found that Canadian labour costs in the machinery industry are 10 to 14 percent higher in Canada than in the United States. The Conference Board in Canada's productivity study found that in sixty-four goods-providing industries, Canadian labour wages averaged 2 percent above U.S. levels, while in the service industries they were 12 percent higher.

While both the federal and Ontario governments have eased the tax burden on a wide range of machinery purchased by Canadian companies, the 10 percent discount on the Canadian dollar has partially or fully offset this cost relief in the case of imported machinery. While a significant reduction in the tariff on imported machinery would narrow the unfavourable cost differential for Canadian industry, it would do so at the long-term cost of severely inhibiting the growth of the Canadian machinery industry. The machinery industry is labour intensive; it is estimated that a $1 million machinery order placed in Canada creates a demand for 113.1 man-years of work and a total output demand on the economy of $5.5 million.[8] In 1976 the trade deficit in industrial machinery amounted to $2.2 billion, a deficit that has accelerated sharply since 1970, as Figure A5 illustrates. Clearly, additional stimulus for this industry in the form of tax relief, subsidized technological research, and skilled worker training programs should be given a high priority.

Assessment of government tax incentive policies to stimulate investment

Historically, Canadian federal and provincial governments, along with most governments in the industrial world, have utilized a wide range of incentive programs to promote industrial growth, minimize regional industrial disparities, and improve the international balance of payments position by stimulating exports and reducing dependence on imports. Such programs employ incentives in the form of grants, subsidies, tax relief, and government procurement regulations. While many of these programs have an indirect stimulating effect on investment, the following comments concentrate on policies directly aimed at stimulating investment.

The rationale for a program of tax concessions to stimulate investment is a perceived future shortfall in the level of investment necessary to allow the economy to grow at its potential non-inflationary rate. There are two distinct analyses of the reasons for a perceived short-fall. In one the major problem is conceived of as an insufficient flow of national saving to finance the required volume of capital investment. In this case the appropriate policy response would be tax incentives to increase the volume of saving in the economy. The other analysis focuses on those factors that, in spite of an adequate flow of savings, operate to inhibit business from initiating the required volume of capital investment. These short-term factors include low levels of aggregate demand, low capacity utilization rates, low rates of return on new investment, uncertainties regarding the post-control behaviour of wages and prices, and the situation in Quebec. Longer-term influences include the negative impact of environment regulations, higher energy costs, fears of a persistent decline in rates of return on new investment, uncertainties regarding the political and economic environment in which business will operate, and the extent of future government encroachment on decision-making in the business sector. With such a broad variety of deterrents to achieving the optimum level of investment, it is clear that direct investment

[8] The Waterloo Research Institute Study of the Machinery Industry.

incentives can provide only a partial solution to the underinvestment problem.

Investment tax incentives fall into two broad categories: those tied directly to an increase in investment – expenditure-oriented, such as an investment tax credit or accelerated capital cost allowances; and those aimed at increasing the after-tax income of the company – result-oriented, providing cash flow for further investment. The United States has made more active use of investment tax credits than accelerated capital cost allowances, whereas Canada has concentrated more on capital cost allowances than on investment tax credits. The scaled reduction enacted in 1973 in the corporate tax rates from 49 to 40 percent for manufacturing and processing companies, is the principal recent example of a result-oriented incentive.

The appropriateness of investment tax incentives as a policy option depend on whether the realized benefits outweigh the costs. The benefits could arise in several ways: from an increase in total business investment above that which would have occurred in the absence of the incentive; from the stimulation of investment in a specific industrial sector which was perceived to be particularly important in spurring, over-all growth; from stimulation of investment in a particularly low growth region. Canada has utilized all three approaches to tax incentives.

A distinction needs to be made between incentives designed to cushion the amplitude of a cyclical downturn by advancing the timing of investment projects and those aimed at restructuring the industrial base and ensuring that an adequate stock of cost-competitive industrial capacity will support an economy growing at potential rates. Since current and prospective economic trends in North America and overseas point towards the persistence of highly competitive markets, incentives that stimulate investment over the longer run demand the highest priority.

With the burden of maintaining a satisfactory rate of Canadian economic growth falling more heavily in future on increased productivity rather than a fast-growing labour force, investment tax incentives need to be given a degree of permanence and certainty if they are to have a maximum impact in stimulating investment. The ideal long-range approach is a policy of tax reduction at the personal, corporate, and retail sales levels. Such a policy would interact positively within the investment decision-making process at all the critical negative points that currently impede investment. Cuts in personal and retail sales tax would stimulate market growth, and assist in lowering the inflation rate. With consumer after-tax incomes rising, there would be a better prospect of holding wage settlements and unit labour costs to competitive levels with U.S. trends. Cuts in corporate taxes would improve both rates of return on new investment and corporate cash flow. The secular decline in the ratio of after-tax profits to GNP (Figure A6) is a rough measure of a declining rate of return on investment, an important deterrent to capital investment expansion. With such a list of positive results in its favour, there can be little quarrel with the soundness of such a policy. But with the large current cash deficit of the federal government, the tight budgets of provincial and municipal governments, and their large fixed expenditure commitments, practical implementation of the policy becomes difficult. Nevertheless, Canada faces such serious problems with respect to competitiveness and structural imbalance that nothing less than a progressive lowering of the over-all tax burden on individuals and corporations is likely to direct the economy into a strong pattern.

Recognizing, however, that in the short run the scope for any significant lowering of the over-all tax burden is limited, there is a constructive role for selective increases in investment tax incentives. To ensure that tax concessions are tied as closely as possible to new capital expenditures, an indefinitely extended increase in the investment tax credit would be the preferred mechanism. While more liberalized capital cost allowances have a stimulating effect on investment, the current level, when adjusted for inflation accounting, is generous by international standards but has the disadvantage of becoming less valuable over time, favouring companies that are capital intensive with large yearly investment programs, rather than smaller ones in greater need of tax relief. With regard to sales taxes, the federal and Ontario governments have reduced taxes on categories of investment equipment, and further initiatives along this line would be constructive.

It is difficult to find hard empirical evidence identifying increases in investment associated with specific programs of investment tax incentives. The few studies conducted in the United States and Canada have found a positive correlation, but at the cost of a considerable loss in corporate tax revenue. The effect of Canadian tax incentives has been analysed in three studies – the Report of the Corporate Tax Measures Review Committee to Parliament in June 1975, a report by R. M. Hyndman on the efficiency of Recent Corporate Income Tax Reductions for Manufacturing (*Canadian Tax Journal,* Vol. 22), and a report by Carlton Braithwaite of the Economic Council of Canada.

These reports assessed the impact on new investment of budgetary tax changes effective 1 January 1973 reducing the corporate tax rate from 49 percent to 40 percent for general manufacturers and processors and introducing a two-year capital write-off period for manufacturing and processing machinery and equipment acquired between 9 May 1972, and 31 December 1974. The parliamentary committee report estimated that on the basis of statements received from 1,288 companies the tax incentives had resulted in increased investment of roughly $1.8 billion, or 20 percent of their total planned investment for the period. While the objectivity of company replies was regarded with some scepticism, a positive correlation between the investment incentive program and capital spending clearly emerged. Both the

Hyndman and Braithwaite studies estimated the additional investment stimulated by the two measures to be positive but below the estimates of the parliamentary committee report. The stimulus was stronger for the machinery and equipment sectors than for construction.

As might be expected, the stimulation is greatest when there is optimism regarding other factors that influence investment decisions, such as the outlook for markets and profitability; in today's uncertain environment the stimulation will be less robust than the more buoyant years of 1972-4.

Discussion thus far has concentrated on the use of investment tax incentives to stimulate capital spending beyond that which business would undertake given the uncertainty of market growth and rates of return, and which over the intermediate term would fall short of providing the industrial capacity to support a full employment rate of economic growth. A similar short-fall in investment has been postulated on the basis of slower growth in domestic savings than that required to finance the optimal level of capital spending, optimal, that is, in the sense of providing the capital stock necessary to employ available resources fully.

This possibility of a capital shortage has been discussed as a phenomenon affecting both Canada and the entire industrial world. To the classical economist there can be no such thing as a capital shortage, because the financial demands of an increase in capital spending will cause interest rates to rise, diverting sufficient income from consumption to saving and eliminating any short-fall in savings. Given the relatively stable ratio of total personal and corporate savings to GNP, the major upward adjustment in saving in the final analysis is expected to occur in the government sector. A faster-growing Canadian economy stimulated by a rise in investment is expected to generate the increase in incomes and government tax revenues sufficient to create the necessary government surplus. Clearly this result depends on governments continuing to exercise restraint over their expenditures in an environment of buoyant revenues.

In the real world, however, savings and investment do not equate so smoothly; the motives that lie behind the saving and investment process are quite dissimilar. Reliance on an increase in government savings to balance the equation will be greeted with considerable scepticism by a Canadian audience.

The worry about a possible capital shortage arises because of a prospective increase in capital spending as a percentage of GNP at a time when the total savings percentage of GNP will be declining. The case for a short-fall of domestic savings relative to the financing needs of capital investment in the intermediate period ahead rests on two assumptions: a moderately declining rate of personal and corporate saving on the one hand, and an accelerating rate of capital spending, largely energy-related, on the other.

It may appear contradictory to forecast a declining rate of personal savings after several years of historically high personal rates. Figure A7 illustrates the growing percentage of total savings contributed by personal savings compared with the declining share of corporate saving. As a percentage of after-tax personal income, personal savings are currently just under 10 percent, compared to an average of 7.5 percent over the past ten years. The high rate of personal savings in recent years appears in part to have been a response by individuals to maintain the real value of their savings in a strong inflationary environment when their expectations of continuing high inflation were also strong. Furthermore, the uncertain economic outlook and high unemployment rates since 1974, coupled with the availability of high interest rates and generous tax incentives for savings under the registered retirement savings program, have tended to maintain personal savings at a high level. In the intermediate period ahead, the prospect of some deceleration in the rate of inflation, particularly in the expected rate reinforced by the increasing percentage of income indexed to the cost of living, together with the slow dissipation of the current negative view of the economic outlook, will likely lower the personal saving rate closer to the historical average.

In the past two decades, a significant percentage of personal savings has represented repayment of mortgages on owner-occupied housing. With the prospect that in the next decade residential construction expenditures will decline moderately as a percentage of GNP and the number of homeowners extinguishing mortgages will rise relative to those assuming new ones, this source of saving may be expected to decline moderately.

Demographic trends in the decade ahead indicate a faster rate of growth in the higher-spending segment of the population (20-39 years and 65 years and over) compared with the higher-saving age group (40-65 years). There is some danger, therefore, that in the absence of additional tax incentives for savers the rate of increase in personal savings will decelerate in future.

As a percentage of GNP the secular decline in after-tax corporate profits has been a principal contributor to the declining trend in corporate saving. In the highly competitive market environment that lies ahead there is little prospect that the corporate sector can improve its saving role in the absence of some form of tax relief, a problem that will be discussed in greater detail later. Finally, government saving in the period ahead will be biased downward by a decelerating rate of net savings flowing to the government sector from the Canada and Quebec Pension Plans and other government-operated pension funds. While an early increase in the contribution rate could restore the level of government saving, the effect on total saving would be largely offset by a decline in the rate of personal saving. There is also a downward bias in corporate saving arising from the accelerating costs of funding corporate pension plans and the large outstanding liability represented by the unfunded portion of existing plans. The trend toward adjusting pensions for inflation, by calculating pensions on earnings close to retirement age and by assuming a partial indexing of pensions, will continue to absorb an increasing percentage of corporate cash flow.

In contrast to the negative prospect for maintaining or increasing the personal and corporate saving rate over the intermediate term in the absence of additional tax relief, the likelihood of an increase in the demand for funds to finance an accelerating rate of energy-related capital spending is a view shared by all major forecasts of Canadian capital spending for the next decade. These forecasts estimate an increase in business investment as a percentage of GNP ranging from roughly ½ to 2 percentage points. There would thus appear to be some basis for concern about the availability at a reasonable cost of the funds to finance the projected level of investment, particularly during the middle years of the decade.

In addition to relying rather heavily on government surpluses to maintain a balance between saving and investment during the projected period, most forecasts assume continuing high levels of external borrowing to help achieve the balance. For example, the Institute for Policy Analysis at the University of Toronto predicts a net yearly average inflow of foreign capital amounting to $4.1 billion over the period 1976-81. This compares with an estimated net inflow of roughly $4.4 billion in 1977. This continued heavy reliance on external borrowing raises two important questions: the continued availability of such funds at competitive costs and the ability of Canada to absorb such inflows without undesirable restraints on monetary and fiscal policy.

Although Canadians in recent years have widened their market for external borrowing, the U.S. market will continue to provide the bulk of borrowed funds. Thus, the continued receptivity of this market to Canadian securities is a crucial issue. While there has been some discussion of a possible capital shortage in the United States that would limit the access to it of foreign borrowers, the large size and steady growth in that market relative to the projected Canadian demands ought to reduce apprehension to minor proportions. A more serious concern is that uncertainties in the Canadian economic and political situation, together with the persistently large balance of payments deficit and the fast-growing annual bill for interest and dividend payments on external debt, will persuade major U.S. institutional investors in Canadian securities to lower the percentage of their portfolios invested or to increase interest rates in order to compensate for the added risk. To the extent that such borrowing is related to financing energy projects or other resource developments possessing products in good demand in export markets, the availability problem is likely to be minimal, though interest costs are likely to command an historically wide premium over U.S. rates. However, other borrowers may well find their access to U.S. funds both more limited and costly.

From Canada's point of view, continued heavy reliance on foreign funds creates several problems. It has been argued that since the bulk of foreign borrowing in recent years has been in debt form it does not threaten Canada's drive towards greater financial and economic dependence. While that may appear to be the case in any analysis of the percentage of foreign ownership of Canadian assets, in fact the very rapid increase in interest and debt repayment charges to foreign lenders is creating a dangerous degree of rigidity in the management of Canada's balance of payments and the level of Canadian interest rates.

Given the prospective slow growth in the economies of the industrial world and the slow progress in realigning Canada's high cost structure with that of its major competitors, particularly the United States, the chances of increasing our trade surplus or reducing our tourist deficit sufficiently to offset the deficit arising from external borrowing are not at all certain. The problem, without exaggerating it, has sufficient substance to emphasize the need to stimulate the growth of domestic savings to the fullest extent possible. Through such tax incentive measures as the Registered Retirement Savings Plan, the Registered Home Ownership Savings Plan, and the tax relief granted the first $1000 of income received in interest or dividend form, the government has recognized this need. The amount of funds invested in RRSP's and RHOSP's in 1976 is estimated at $363 million. The difficulty in assessing the net effect on total savings is in determining the extent to which these plans stimulated new savings, rather than a flow of current savings from alternative investment forms.

A problem in financing new investment, more serious than a prospective shortfall in domestic savings, is the distortion that has occurred under inflationary conditions in the flow of savings towards short-term, rather than long-term, debt instruments on the one hand and towards debt and away from equity instruments on the other. This shift is not surprising, given investor uncertainty, attractively high interest rates on short-term savings, the negative effect of inflation on corporate cash flows and profitability, and equity investor psychology. The effect of these trends on the financial structure of Canada's industrial corporations is illustrated in Figure A8.

In addition to the increasing reliance of corporations on funds raised in the marketplace rather than those internally generated, which to a degree increases financing uncertainty for them, the composition of these external funds has been skewed toward short-term obligations and away from equity financing. The rising short-term/total debt ratio has increased the financial vulnerability of the corporation to cyclical swings in credit availability. This trend has been forced on many corporations by investor preference for short-term securities and the reduced cash flow of corporations, which for some companies has reduced their earnings coverage of annual interest payment on outstanding debt below that required in bond covenants before new debt can be issued, or, in the absence of prior covenants, below the interest coverage that investors require for a new long-term debt financing. Most corporations have had little difficulty obtaining short-term funds in sufficient volume, though at a relatively high cost. The increasing incidence of bankruptcies caused by bank refusal to extend or increase credit lines, indicates the risk of too great a reliance on short-term debt, a consideration which has undoubtedly restrained new capital investment.

An equally serious problem is the secular rise in the debt/equity ratio. This reflects the low market price (frequently below book value) at which equities are currently selling in the market – an extremely costly form of corporate financing. The degree of equity undervaluation is indicated by the number of corporations finding it profitable to buy their own shares on the market. The rising debt/equity ratio not only increases corporate financial vulnerability to fluctuations in credit markets but also inhibits corporations from issuing new long-term debt. While a decelerating rate of inflation would in the long run greatly help to correct these distortions, an immediate corrective in the form of special tax incentives geared specifically to financing new capital investment might be justified as an interim measure. Some suggestions along this line are presented below.

The outlook for investment and savings over the next five years

In an attempt to assess business attitudes towards aspects of the investment outlook over the next five years the Council commissioned the Conference Board in Canada to carry out a special survey. This survey was composed of 10 questions and was appended to the regular quarterly questionnaire sent by the Board to its regular respondents to the Quarterly Survey of Business Attitudes in October, 1977. Detailed results of the survey are contained in Appendix B. However, the findings can be summarized as follows.

The questions asked deal mainly with inflation, investment and the source of capital financing, environmental standards, tariffs and productivity. With respect to inflation, it is expected that price levels in Canada will increase at about the same rate or more slowly over the next five years than they have during the past year. Very few respondents expect the price level to grow at a faster rate.

In the area of investment, the majority of respondents expect that, over the next five years, the level of annual average capital investment expenditures will increase relative to the past year. The factors most often ranked in the top five as adversely affecting the level of planned investment expenditures include: government interference in the decision-making process, government tax policy, excess productive capacity, national unity and potential separation, and escalating labour costs. The average percentage breakdown of the source of capital financing over the past five years and expected over the next five years is highest for internal funds followed by external funds raised domestically.

Investment expenditures required to meet legislated environmental standards have generally not made companies uncompetitive internationally and are not expected to do so over the next five years. It is also expected that, over the same period of time, a fifty per cent reduction in present import protection would not result in existing facilities becoming uncompetitive.

Finally, with respect to productivity over the past five years, it is felt by the majority of respondents that, relative to the United States, productivity levels are lower or at best equal to those in the United States. Over the next five years, it is expected that these relative productivity levels will remain constant or more in favour of the United States.

Considerable analytical research is being carried out, both in public and private research centres, to improve economic forecasting of trends in business capital investment. Recent research has concentrated on developing forecasting models based on the relationship between output and capital input in the production process. This approach makes the forecast sensitive both to the trend in capital/output ratios and to the growth trend for the major industrial sectors of the economy. For this reason the capital output ratio approach is more suitable for longer-range forecasting. In addition, over the intermediate term other facts such as the level of business confidence, wage and price behaviour and government tax and regulatory policies can have a decisive effect on investment spending. The method is useful, however, in determining the volume of investment required to sustain a given rate of growth in the economy over the intermediate or long term.

The Conference Board in Canada has carried out several simulations using its capital output production-based model to determine the capital investment required to bring full employment (an unemployment rate of 5 percent) by 1982. This requires a 6.1 percent annual growth rate over the period starting in 1978. The simulation which required the smallest increase in capital spending to achieve this assumed a strong export demand over the period, a 6.4 percent annual increase in government spending, a decline in the inflation rate to 5 percent by 1982, and a total of $10 billion (1971 dollars) energy-related investment over the period. The results of the simulation are shown in Tables A30 to A33. While this simulation can in no sense be regarded as a forecast, it usefully shows the large capital expenditures required to move the economy to full employment. It also illustrates the large shortfall (averaging $10.6 billion annually over the period) in the generation of domestic savings to finance these expenditures. Particularly significant is the fact that the corporate sector's internally generated funds would fall increasingly short of financing capital spending, the shortfall reaching a total of $26 billion by 1982.

The Ontario Economic Council has published projections for the economies of Canada and Ontario to 1987. These projections were prepared by three economists at the Institute for Policy Analysis at the University of Toronto.* Since the figures are presented and reviewed in a readily-available companion volume, they will not be discussed here. On the assumptions made, the projections of gross fixed capital formation in Canada are as follows for three selected years.

		1978		1982		1987
		(billions of constant (1971) dollars)				
Industrial capital		16.9		23.0		28.3
energy	5.4		8.6		9.5	
other	11.5		14.4		18.8	
Residential construction		6.1		7.5		9.6
Social capital		4.4		5.5		7.1
Total		27.4		36.0		45.0
Capital formation as a percentage of GNP		21.6		23.1		23.3

The shares of total Canadian capital formation (current dollars) financed by major sources of savings for the same three years are projected as follows (the total does not add to 100.0 because of residual error of estimate and omission of some negligible items).

	1978	1982	1987
	%	%	%
Personal saving	23.1	15.1	11.5
Government gross saving**	3.8	13.3	12.7
Capital inflow from abroad	10.5	9.5	13.8
Corporate retained earnings			
Capital consumption allowances	56.8	58.7	59.5

These same projections suggest an unemployment rate for Canada of 7.9 percent in 1978, 6.7 percent in 1982 and 5.9 percent in 1987.

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*John A. Sawyer, D. Peter Dungan, John W.L. Winder, *The Ontario Economy, 1978-1987: Update 1978.* (Toronto: Ontario Economic Council 1978). See particularly tables 1.3, 2.2 and 2.3.

**includes government capital consumption allowances.

Two recent studies have focused more specifically on the volume and financial requirements of energy-related capital investment.[9] The most detailed study is that by the Federal Department of Energy, Mines and Resources, which develops estimates over the period 1976-90 based on two alternative scenarios. The first scenario is more optimistic regarding the development of frontier hydrocarbons, assuming 6 billion cubic feet per day of gas, 500 thousand daily barrels of oil, and 440 thousand daily barrels of synthetic and heavy oil by 1990. Three frontier pipelines are projected, and electricity demand is assumed to grow at 5 percent, compared to its historical rate of 7 percent. The second scenario assumes no oil, reduced gas supplies from frontier areas, no Mackenzie Delta gas, one frontier gas pipeline, and one million barrels daily of synthetic and heavy oil by 1990, as well as continued growth in electricity demand of 7 percent. Tables A34 and A35 contain the detailed estimates.

The external (to the corporations) financing requirements of the energy program under the two scenarios are outlined in Table A36. While both scenarios call for a total of $181 billion (1975 dollars) in energy capital investment over the full period of 1976-90, the external financial requirements are larger under the second scenario, particularly in the 1986-90 period, because of the heavier financing needs of the electric generating sector. If one accepts the report's assessment that the two scenarios represent extreme positions in the development of frontier resources and in pipeline construction, a compromise estimate of $140 billion in external financing requirements over the period 1976-90 and $85 billion for the period 1976-85, can probably be anticipated. Based on historical experience, the study estimates that borrowing on foreign markets will supply the following percentages of external financial requirements – electricity 43 percent, petroleum 57 percent, and pipeline 21 percent. Under the first scenario the dollar amounts for the period 1976-85 are petroleum $4.8 billion, pipeline $5.5 billion, and electricity $23.6 billion. Foreign borrowing requirements under the second scenario are estimated as follows: petroleum $4 billion, pipeline $36 billion, and electricity $37 billion.

The study discusses in detail variations in energy pricing and financial trends that would alter the estimates. The weight of such variations would indicate the need to increase the financial adjustments in non-energy sectors of the economy to accommodate the energy program. An example is cited for the electric utility industry. The price assumption in the first scenario is an average price in the period 1976-90 of 18 mills per kwh. If in fact the price is held to 15.3 mills, the external borrowing requirement of the industry would increase by $26 billion. (Both figures are in terms of 1975 dollars.)

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[9] *Financing Energy Self Reliance, a background paper to an Energy Policy for Canada – Policies for Self-Reliance* (Ottawa: Department of Energy, Mines and Resources); B.V. Gestrin, *The Financing of Energy Investment.*

Assuming a 4.3 percent rate of growth for the economy as a whole over the period 1976-85, the study makes estimates of total capital investment and domestic savings for the period as detailed in Table A36. The average annual shortfall in domestic saving in the period 1978-85 to finance total fixed capital formation is estimated at $38 billion (1975 dollars). The prospective shift in the percentage share of total borrowing by domestic non-financial borrowers is given in the same table.

To accommodate private capital investment financing, mainly energy, significant reductions are required in the share borrowed both by the government and residential construction sectors. The structural problem of redirecting a significantly increased volume of institutionalized personal saving from investment in mortgages to long-term corporate bonds will be extremely difficult, even with incentives in the form of additional tax relief on corporate bond income or a widening yield differential in favour of corporate bonds compared to mortgages. Also, it seems clear that unless the corporate sector receives more tax relief, the assumption in the study that corporate saving will increase at a faster pace than GNP might be overly optimistic. It must be stressed that the government report is not a forecast but an estimate of investment and savings trends based on a specific set of assumptions. As such, it is valuable in exposing the magnitude of the financing problems and structural changes that will have to take place in Canada's capital markets to accommodate the large prospective increase in energy-related capital investment.

A Canadian Imperial Bank of Commerce study has also examined capital investment and savings trends over the period 1976-82. The principal conclusions of the study are summarized in Tables A37 to A40. The $73.5 billion (current dollar) capital investment estimated for the energy sector over the period 1978-82 compares to the Department of Energy, Mines and Resources estimate of roughly $56 billion (1975 dollars) over the same period. The average annual amount of net foreign borrowing over the same period is estimated at $6.7 billion. Assuming no change in the tax structure, relatively optimistic estimates for both personal and corporate savings are made. Although the EMR study does not address the topic it is apparent that the financing of Canada's large prospective increase in energy-related projects, together with the increase in other private capital investment necessary to permit the economy to grow at its non-inflationary potential, is to be accomplished, with a sound balance between long-term debt, equity, and short-term obligations and a conservative reliance on foreign capital, certain measures need to be taken. Both personal and corporate saving require additional stimulus. In the corporate sector specifically, an early adoption of inflation accounting and an increase in the investment tax credit would be constructive measures. The equity investor in particular also needs more encouragement.

The studies referred to here suggest that an increase in government saving will bring domestic saving into balance with investment. Increase in government saving is anticipated as a result of an increase in tax revenues generated by a buoyant economy and a deceleration in the rate of government spending.

The outlook for selected major industries located in Ontario

THE OIL INDUSTRY

From a capital investment point of view, the oil industry in Ontario is confined largely to the so-called downstream facilities, that is, refining and distribution. Crude oil and gas are produced in Ontario in relatively small amounts. The production of oil in 1976 is estimated at 600,000 bbls, compared to consumption of 200 million bbls. The province produced 5.5 million Mcf of gas, compared to consumption of 715 billion Mcf. Roughly 25 percent of Canadian refining and marketing facilities are located in Ontario. In recent years substantial new refining facilities have developed in Ontario, based partially on the expectation of exporting products to the United States.

This increased capacity, together with a forecast reduction in the growth rate for oil and gas consumption to an annual average of 2.7 percent over the period 1975-90, compared to a rate of 6.5 percent in the 1966-73 period, suggests that an excess refining capacity in the range of 10 to 15 percent will exist over the next five years. Under these conditions, no new major refining facility is likely to be constructed in Ontario during this period. Nevertheless, a substantial volume of new downstream investment is forecast. This assumes compliance with environmental regulations, expanding facilities to produce unleaded gas (which is expected to expand from a current 10 to 11 percent of the gasoline market, to 50 to 55 percent by 1985) and modifying existing refining capacity to handle the growing volume of synthetic crude oil that will become available. The National Energy Board has estimated that total industry expenditures in these categories across Canada will total around $9 billion in constant dollars over the period 1975-90. A more conservative industry estimate, based on a slower rate of gas consumption and a lower volume of discretionary expenditures, puts the total at $4 to $6 billion in constant dollars.

The percentage of these expenditures that will be made in Ontario is difficult to predict accurately; but, since 25 percent of Canadian refining capacity is in Ontario, a rough assumption would be that Ontario would receive about the same percentage of such expenditures. This will depend in part, on the emergence of somewhat less competitive conditions that now prevail in the market and, in part, on the extent of supportive government policies. A principal concern of the industry with respect to its downstream operations is to improve profitability sufficiently to provide more internally generated funds to finance the prospective level of capital expenditures in this area. In order to achieve this, it is important that federal and provincial governments allow increases in crude oil prices to be reflected in retail gas prices with a minimum of delay.

RESIDENTIAL CONSTRUCTION

As discussed in a previous study on housing, published by the Ontario Economic Council,[10] both the demand for housing and the pattern of demand between user-owned or rental, high-cost or low-cost, have been significantly influenced by government policies. Two themes have dominated government policies towards housing. The most consistent has been the conviction that an adequate level of shelter is not only a basic right of every Canadian but that an adequately housed population is an important factor in achieving a dynamic economy. A secondary theme has been the usefulness of residential construction as an anti-cyclical activity. This is due to several characteristics of the industry: its sensitivity to relatively modest injections of government stimulation in the form of grants, subsidies, or tax relief; the fact that it is labour intensive, rather than capital intensive, so that its stimulation has an immediate and significant impact on employment levels; finally, the material inputs required by the industry are mainly supplied by the domestic market, rather than through imports, so that each dollar of government stimulation has a high multiple effect on domestic production generally. Given the prospect of lower growth rate for the Canadian economy in the decade ahead, with continuing high unemployment (though lower than current rates), governments will be under pressure to rely upon the anti-cyclical role of the industry.

In terms of the total housing stock and yearly additions to this stock in recent years, and in comparison with trends in other industrial countries, it is difficult to support an argument that Canada has devoted an inadequate percentage of its resources to the housing industry. What is clearly evident,

[10] *Issues and Alternatives 1976, Housing* (Ontario Economic Council)

however, is that in spite of a multiplicity of government support programs and administrative regulations there continues to be a lack of enough housing in price ranges and in geographical areas where the need for additional adequate shelter continues to be a pressing priority. Diverting additional government funds towards the industry, without first dealing with the underlying problem of providing low-income families in urban centres with adequate shelter at prices they can afford will do nothing to solve the basic problem and will divert investment funds from sectors of the economy where expansion can create permanent jobs and incomes.

In addition to redirecting a larger volume of new housing toward low-income groups, there continues to be growing demand for housing based on the trend in family formation, net housing replacement, and an allowance for a minimum vacancy rate. A forecast for household formation rests on certain basic assumptions regarding population growth, age distribution of that growth, and the level of net immigration. The projections that follow are based on preliminary and unofficial estimates developed by the Program and Market Requirements Division of C.M.H.C. (Tables A9 to A14). The principal factor accounting for the difference in the three projections is net immigration into the provinces, which can be highly variable. Projection 2 corresponds most closely to immigration estimates developed at the Institute for Policy Analysis at the University of Toronto.

The family formation estimates are biased upward in relation to population growth by the faster growth trend projected in the 20 to 39 age group, where family formation and home buying are strongest. Housing starts over the period will vary from the projections depending on trends that occur in income distribution, the availability and cost of mortgage funds, and the relationship between increases in housing costs and personal disposable income. The projection of housing starts can be regarded as a minimum figure to supply the demographic demand for housing. An estimate of housing requirements by the Ontario Ministry of Housing assuming net immigration of 50,000 is illustrated in Figures A9 and A10.

THE PULP AND PAPER INDUSTRY

The pulp and paper industry over the years has been an important contributor to the prosperity and development of the province. Apart from its direct contribution in terms of employment and incomes, it has supported activity in a wide variety of other industries – hydroelectric power, chemicals, machinery manufacture, and construction. Table 6 illustrates Ontario's share of Canada's paper industry.

Table 6

Selected data on the pulp and paper industry: Canada and Ontario, 1976

	Ontario pulp and paper	Canadian pulp and paper	Ontario's share of the industry (%)
Employment	21,909	86,203	25.4
Number of mills	39	152	25.6
Newsprint exported (%)	82	90	

The province contains 22 percent of Canada's commercial timber. Over the past fifteen years, the Canadian pulp and paper industry has dropped in market share from 46 to 38 percent in the world market and from 74 to 63 percent in the U.S. market. The reasons for this decline include stiff competition from lower cost production in the southern United States in terms of wood supply, transportation, and, in recent years, 15 to 20 percent lower wages. While the wood cost differential is narrowing as southern U.S. land values and taxes rise to uneconomic levels for wood lot use, the cheaper transportation and wage costs (up to 20 percent lower in mill operations and 100 percent in woodland operations) continue to give U.S. production a strong competitive edge over most Canadian mills.

The fine paper sector of the Canadian industry (52 percent is located in Ontario) has suffered most from U.S. competition. The large U.S. market for fine paper has allowed U.S. producers to install facilities that concentrate on volume production of a limited range of grades at a low relative cost. The Canadian industry operates smaller plants producing a wider range of grades to supply the domestic market. Nevertheless, with some tariff protection the Canadian industry, until the last two years, operated with a low but positive profitability. The series of long strikes in 1975-76 and the premium on the Canadian dollar allowed U.S. producers to capture a significant share of the Canadian market with lower cost paper. Even with Canadian mills back at full production and the Canadian dollar at a discount, rather than a small premium, this shift to a U.S. source of supply has been difficult to reverse completely due to a continuing marginal cost advantage for U.S. production. In an effort to recover markets, Canadian prices have been cut to very low profit levels. Another worry for the fine paper industry is the possible loss of tariff protection under the current round of GATT negotiations. If this were to occur a number of small plants would undoubtedly be forced to close. While in the long run this may be a desirable step towards a more efficient rationalization of Canadian production facilities, given the much lower U.S. construction, operating, and transportation costs, it is by no means certain that new Canadian-owned facilities will be built in Canada rather than in the

United States. This conclusion applies to some degree as well to other sectors of the paper industry.

For a number of years the industry as a whole has increased capacity and productivity by speeding up and rebuilding older machines and introducing technological improvements, such as twin-wire formers and more experimental mechanical pulping techniques, such as thermal mechanical pulping. The increased use of mechanized logging operations, which lowers costs and permits the economic utilization of every part of a log, has not achieved the same degree of success in Northern Ontario as on the west coast, primarily because of Ontario's more rugged terrain and less uniform mix of trees. The scope for significant additional improvement in capacity or productivity from speeding up or upgrading current equipment is a diminishing one. However, given the prospective slowdown in the rate of world demand for pulp and paper products, the Canadian industry, currently operating at 82 percent of capacity with an estimated annual capacity growth to 1980 averaging 1.6 percent (compared to 4 percent in the 20-year period 1955-76), can supply the expected demand with current facilities for several years. The current problem facing the industry is not one of physical capacity but the ability to be able to produce a competitive product at a satisfactory profit.

If the Canadian pulp and paper industry is to continue as a viable growing industry in the next decade, it must find solutions to the current serious problems restraining its progress. The reduction and control of high-cost inputs and the generation of sufficient cash flow to finance required investment are paramount issues. The industry cannot rely on a 50 percent increase in newsprint prices or a continuation of a discount on the Canadian dollar to ensure that major new additions to capacity will be profitable. Furthermore, the industry cannot wait until the mid-1980s when capacity is likely to be fully utilized before embarking on major initiatives to replace old inefficient facilities with modern ones.

As in other industries, faster-growing domestic and foreign markets would, by improving profitability and cash flow, considerably ease the problems facing the industry. As indicated earlier, forecasts of world market growth indicate some deceleration in demand and persistence of highly competitive conditions. The emphasis therefore must be on controlling or reducing costs and improving profitability and cash flow. The control of labour and anti-pollution costs are priority items. Both high labour rates and costly, prolonged strikes have been major contributors to the poor profit performance of the industry in recent years. While poor management has in some cases been responsible for decisions leading to lower-than-optimal productivity performance or misallocation of resources due to misjudging markets, an improvement in labour-management relations that ties wage increases to productivity increases and reduces time lost through strikes is a key prerequisite for a viable Canadian industry. Management, labour, and government have a shared responsibility in solving this problem. Here, as in other industries, governments, federal and provincial, have a particular responsibility in setting a conservative example in their own wage settlements and in policies of tax reductions at the personal level to minimize upward pressure on wages and prices.

Governments can also assist the industry more effectively in coping with the problem of compliance with anti-pollution regulations. While future new mills will have acceptable pollution standards at reasonable cost, the technology does not yet exist to attain such standards in old mills without incurring prohibitive costs. This creates a dilemma for both management and government. Management questions the wisdom of spending a large amount of scarce investment funds for anti-pollution controls that initially do nothing to improve productivity in an aging plant that is rapidly becoming less competitive. Government faces the problem of enforcing strict pollution controls at the risk of closing a number of plants with the subsequent loss of the jobs and incomes generated by these plants. A case can be made for greater government support of research into anti-pollution technology and more financial assistance in specific cases – assistance for a mill that has a sufficiently long expectancy of maintaining its competitive position to justify large expenditures for pollution control.

Some form of additional tax relief will be required to assist the industry in building up its resources to finance the large capital expenditures that will be required to expand and rebuilt competitively. Since such expenditures are not urgently required before the early 1980s, a plan that exempts some percentage of profits from corporate taxes, provided it is deposited in a government fund and withdrawn by the company within, say, five years for the sole purpose of financing a new facility, or expanding existing facilities, deserves some study.

The industry has also made representations to the Ontario government to share the responsibility for forest management of certain crown lands at the option of the licencee in order to maximize efficient management and reduce the cost of this important material input. With proper safeguards for government and some incentives for industry, such a proposal would seem to merit serious study.

THE MINING INDUSTRY

The Ontario metal mining industry produces roughly 4 percent of the gross provincial product and about 20 percent of Ontario's exports. It directly employs 41,000 Ontario residents, in addition to 12,000 in smelting and refining. The indirect benefits of the industry – generating incomes in

Northern Ontario and a demand for a variety of commodities and services in the south – are a significant multiple of the direct benefits.

The position of the mining industry in the economies of Canada and of Ontario is illustrated in Tables A16 to A18. The figures indicate that although mining activity has declined moderately over the years as a contributor to over-all Canadian production, it still remains an important sector of the economy, particularly in its contribution to exports. International trade in minerals nets Canada a surplus of approximately $5 billion. The figures also illustrate the declining participation of Ontario in the mining industry. This is partly because the fastest growing sectors of the industry, such as iron ore, coal, and potash, are not significant in Ontario production and partly because the discovery and development of new mines has taken place at a faster pace in other provinces. In the period ahead, when an expanding trade surplus will be required to finance persistent growth in our non-merchandise balance of payments deficit, the future health of the mining industry should be a major concern of government.

The current and intermediate outlook for the industry is dismal as a result of several factors. Under the strong demand pressure for metals during the late 1960s and early 1970s, the industry expanded and moved from a debt-free to a relatively heavily indebted financial position. At the same time that the industry was enjoying a 60 percent increase in prices (since 1971), labour costs rose 80 percent and taxes as a percentage of pre-tax profits increased from 17 percent fifteen years ago to around 41 percent currently.

The energy crisis of 1974, and the slump in world economic activity that followed, reduced both the demand and market price for most metals and confronted the industry with a serious revenue squeeze. Industry after-tax profits have grown less than 1½ percent yearly since 1973 and in constant dollars have declined over 6 percent. It could be argued that ten years ago, when the ratio of after-tax profits to sales was running around 20 percent, even for a high risk industry there was justification for less liberal tax treatment of the industry. Ironically, the government moved in this direction when the industry was on the brink of its most critical financial crisis – declining markets and prices and inflation-induced soaring equipment and labour costs.

In recent years the world environment in which the Canadian metal industry competes has altered unfavourably for Canada. As political risks diminished in many of the resource-rich underdeveloped countries and liberal after-tax rates of return more than compensated for the slightly higher risks, multinational mining corporations, Canadian as well as foreign, directed their exploration activity towards such countries. At the same time some governments in developing countries were beginning to set up their own mining companies and, under the pressure of deteriorating balance of payments deficits, exported minerals in volume even at uneconomically depressed prices. It is expected that world demand for metals will improve over the next few years and prices will return to more economically viable levels.

Continued dynamic expansion in the industry does not depend primarily on the resumption of a rate of return on established mines sufficient to cover operating costs plus a reasonable profit, but on a tax climate that allows the companies to retain sufficient cash flow to assume the high risks and escalating financial costs of exploring for and developing *new* mines in remote frontier areas. Such a tax regime must be competitive with that of other resource-rich countries for which the political risks in comparison with Canada, while still greater, are steadily narrowing. In a survey of the capital investment intentions of the industry conducted in spring 1977 by the Mining Association of Canada, development decisions had been approved on only eight new projects, including capital investment of just over $250 million. Another twenty-four projects, considered economically viable and involving a prospective $1.7 billion in capital investment, have been delayed or deferred.

The uranium sector of the mining industry has often been singled out as the exception in an otherwise problem-plagued industry. This assessment is probably too optimistic. The cost per pound of exploring and developing a new Canadian uranium mine has risen uncomfortably close to current market prices. The increasing development of uranium mines world-wide, coupled with the recent decision of the Australian government to start limited production of its vast ore reserves, casts doubt on the possibility of an early escalation in uranium prices that would stimulate an aggressive revival of Canadian uranium exploration and development over the next three to five years. Both Rio Algom and Dennison Mines are continuing expansion of ore facilities at Elliot Lake involving capital expenditures of roughly $250 to $300 million over the next three to five years, subject to some success in negotiating new sales contracts.

In the years ahead, Canada needs an expanding mining sector to provide exports and jobs during the transition to a more rational and competitive industrial sector. The industry needs a tax regime that recognizes its high-risk, capital intensive, cyclical nature, heavily hit by inflation in terms of capital, labour, and production costs. The graduated Ontario tax may not be appropriate under present circumstances in the industry.

In recent years governments, both federal and provincial, have become interested in promoting further processing and upgrading of Canadian natural resources prior to export. The motive has been to capture the additional employment and income that further processing provides and also to supply a domestic source of refined commodities for expansion in the manufacturing sector. The economic justification for such a use of resources, including the labour and financial resources required, is the prospect of a greater gain in value-added than could be obtained in alternate uses of these resources. A decision to undertake further processing does not automatically guarantee a net economic benefit. Each case needs to be evaluated on the basis of the costs and natural barriers that can thwart the realization of a net benefit. Natural barriers include: the small size of Canada's market for processed materials which exposes the product of large-scale efficient plans to the vagaries and risks of the external market, the long transport haul involved in tapping external markets, and the physical deterioration that occurs for some processed materials during long transportation hauls. While these natural barriers are significant impediments in specific cases, particularly the upgrading of mineral resources, over a broader range of commodities artificial barriers have constituted a more severe form of restraint. The most important artificial barrier has been the structure of tariffs in the principal industrial countries that sets low rates on raw materials and successively higher rates on processed and fully manufactured products. Table A19 illustrates this situation for some of Canada's principal resource products. Cognizant of this problem, the federal government, in current GATT trade negotiations, has urged a sector approach for raw materials, by which the products of a particular industry from raw material through to manufacture would receive more equal tariff treatment.

It is uncertain how successful the government will be in obtaining such concessions. The current climate of weak demand and excess refining capacity for metals, particularly in the United States, where industry and Congressional pressure is growing for import quotas even on raw copper, is certainly not favourable to a major brakthrough on this issue. The difficulty is increased because Canadian exports of raw metals have gone principally to foreign companies, largely in the United States, which already have large refining facilities originally built to process their own raw materials. It has been argued that the growing dependence of the United States on external sources of raw metal, coupled with expensive and rising U.S. energy costs, gives Canada a strong position in negotiating lower tariff rates for processed material. This would be true if Canada's cost and tax structure were sufficiently competitive with U.S. conditions to compensate for higher transportation costs and some loss of control over product mix and quality.

When Canada appeared to have a surplus of cheap energy, available financial reserves, and less social concern about pollution, a major expansion in resource processing had many attractions. With serious constraints affecting all three of these factors, a much more critical appraisal of specific projects is warranted. There are areas of the Canadian economy where further processing can be accomplished without heavy use of energy or financial resources and with minimal pollution exposure. One such case, for example, is the processing of agriculture products.

RETAIL TRADE

Retail trade is the largest and most competitive sector in the Canadian economy. In 1976, Canadian consumers spent $110.5 billion, or roughly 58 percent of GNP on a wide range of goods and services. Approximately 60 percent of this represented the purchase of goods, the bulk of which were distributed through retail outlets. Retail sales in 1976 totalled just over $57 billion, or roughly 52 percent of total consumer spending. During the period 1966-76 total retail sales grew by a compound growth rate of 9.6 percent in current dollars or by 3.2 percent in volume. In 1974 there were roughly 44,000 retailing corporations in Canada and an estimated 100,000 additional unincorporated outlets. While a precise current figure of total employment in retailing is not available, based on the total of 726,000 shown in the 1971 census, a current estimate of around 900,000 appears to be reasonable.

Retail outlets are classified into three main divisions: chain stores, independents including franchise operations, and department stores. In the period 1966-76 chain stores increased their share of the market from 24.3 to 30.6 percent, department stores from 8.4 to 17.4 percent, a plateau reached in 1973 and maintained, while the share of sales by independent stores declined from 67 to 58 percent. If franchised chains such as Canadian Tire and GM dealerships, which operate more as chain than independent stores, are excluded, the decline in the market share of independents is more pronounced.

Because of its highly competitive nature, retail corporate profitability is very sensitive to cyclical declines in the economy, as illustrated in Table 7, which shows the sharp decline in profitability during the 1969-70 and 1975-6 recessions; the low level of profitability has persisted through 1977.

In 1976 capital investment by the retail sector totalled $822 million, roughly 1.9 percent of total Canadian investment. In spite of high levels of capital investment over the last decade in specific areas of the industry, such as shopping centres, discount department stores, and specialized chains and franchise outlets, over-all growth in the volume of new investment in the period 1966-76 has been at a low annual average rate of 0.4 percent. On a per capita basis, real investment declined by 1.0 percent annually. Ontario's share of national retail sales was 37.0 percent in 1976. The Ontario market accounted for 43.2 percent of sales in chain stores, 36.8 percent in department stores, and 33.8 percent in independent stores. Of Ontario sales 20.5 percent occurred in shopping centres compared to 17.6 percent for Canada as a whole. In 1976, the volume of new capital investment in Ontario outlets totalled $198.5 million, 39.6 percent of the Canadian total, $69 million below the peak expenditures of 1973, and $26 million below the average over the past ten years.

While the decline in expenditures from peak rates established in 1973 averaged 26 percent, it was most marked for independents, with a decline of 39 percent. Capital investment per capita in Ontario retail outlets declined to a ten-year low of $24, compared to a peak of $33.7 in 1973 and a ten-year average of $30. The decline in constant-dollar investment continued in 1977 with an estimated drop of 3.4 percent.

Table 7

Retail sector profitability

	Net profit/Sales (%)	Net profit/Equity (%)
1962	1.7	2.2
1963	1.9	2.5
1964	1.7	2.4
1965	1.9	2.8
1966	1.9	2.6
1967	1.9	2.6
1968	1.9	2.5
1969	1.5	2.1
1970	1.5	1.8
1971	1.8	2.3
1972	1.9	2.5
1973	1.7	2.5
1974	1.7	2.7
1975	1.5	2.6
1976	1.1	1.9

The outlook for capital spending in Ontario's retail industry over the next four or five years is for modest growth, compared to the strong growth trend that characterized the first half of the 1970s. The background for this assessment includes: a slower rate of increase in the labour force – estimated at 2.3 percent, compared to 4.0 percent in the period 1970-5; a parallel decline in personal after-tax per capita income from an annual rate of 5.32 percent in the 1970-5 period to 2.66 in 1977-82; the low level of corporate profitability over the past two to three years which not only discouraged new investment but also reduced the ability of the industry to finance such investment; and finally the reduced number of economically attractive suburban sites available for development as retail outlets. On balance, an average expenditure in constant-dollar investment over the next four to five years within 5 percent of current levels appears to be a maximum prospect, modest though it appears.

HYDRO-ELECTRIC INDUSTRY

OVERVIEW OF THE INDUSTRY

Volume growth

The anticipated volume growth of delivered power energy (bulk) in Ontario is summarized in Table 8. It is estimated that the amount of energy provided will increase from 88,159 kegawatts in 1977 to 123,692 kegawatts in 1982, representing an average annual compound growth rate of 7.0 percent. All of the increased supply will be provided to the Ontario market, although it is conceivable that some of it will be exported to neighbouring utilities.

Table 8

Delivered power energy (bulk)

Year	Number of kegawatts	Change (%)
1977	88,159	–
1978	90,230	2.4
1979	96,452	6.9
1980	102,568	6.3
1981	115,830	12.9
1982	123,692	6.8

Source: Load Forecasts: Capital Expenditure Intentions

Price trends

Ontario Hydro has proposed an 11.4 percent increase in the bulk rate for 1977. The actual increase that will be implemented is dependent on the results of the recent hearings with the Ontario Energy Board. The increase in bulk rates is expected to moderate to the 4 to 5 percent range in the mid 1980s.

Table 9

Forecast bulk rate increases

Year	Percentage rate
1976 (A)	22.0
1977 (A)	30.3
1978	11.4
1979	12.6
1980	6.9
1981	8.6
1982	8.6
1983	8.0
1984	8.2
1985	5.4
1986	4.1
1987	4.8

Source: Bulk Rate Increase, Financial Forecasts, 1978-82
Percentage Increase $/KW, LRF 48A, 1983-87

Dependable peak capacity

Dependable peak capacity is forecast to increase from 19,676.5 megawatts in 1976 to 27,310.2 megawatts in 1982, representing an average annual compound growth rate of 5.6 percent. The percentage of power provided by the west system[11] is expected to decline to 3.7 percent in 1982 from 4.6 percent in 1976. The average annual capacity factor[12] in that period is estimated to range from a low of 48.9 percent in 1977 to a high of 55.4 percent in 1982 (see Table A20).

CAPITAL EXPENDITURES

Introduction

When Ontario Hydro is considering future capital expenditures, areas such as technological advances, capital costs, fuel supply, energy economies, and environmental, health and social costs must be considered. Because of the high capital costs of its facilities, emphasis is placed on both reliability and lifetime performance.

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[11] West system comprises that part of Ontario that is north and west of Wawa – Ontario Hydro's Northwestern Region.

[12] The average annual capacity factor represents an average capacity utilization rate. In any one day, the load factor could increase to the 90 percent range during peak periods.

At present, there is a need for the development of more efficient uses of primary fuels in combined heat and power systems. Research and development is also concerned with the potential uses of renewable energy sources.

Capital expenditure intentions

In order to expand existing generation capacity, Ontario Hydro is expected to increase capital spending from $1.4 billion in 1977 to $3.4 billion in 1982. Over that period, it is estimated that the percentage of prospective capital expenditures that will be financed from internally generated funds will range from a high of 26 percent in 1979 to a low of 23.7 percent in 1982 (see Tables A21 and A22).

Impact of Ontario Hydro's capital expenditures on industry

The general conclusion that can be drawn from Ontario Hydro's capital expenditure forecast is that very little new investment by Hydro's suppliers will be necessary within the next five years. The value of equipment orders in constant 1977 dollars is expected to average about $750 million in 1977-80 and $850 million in 1977-83. The 1970-6 average was $750 million. Since the figure for the last seven years does not include the equipment purchased through Lummus for the Bruce heavy water plants, it is clear that the *general* load on industry is expected to show little or no increase over the next several years.

It can be said that Hydro suppliers, who are currently operating well below their capacity, will have little need or incentive to expand their facilities in response solely to Ontario Hydro's forecast requirements. It is estimated that 75 to 85 percent of new capital equipment for Ontario Hydro will be manufactured within Canada during the next five years.

Productivity

Labour productivity at Ontario Hydro is expected to fluctuate between 4.4 percent and 4.7 percent in the 1976-80 period and then increase to 5.0 percent in 1980. Capital productivity is estimated to have peaked at 16.8 percent in 1976, to have fallen to 14.6 percent in 1977 and will increase slightly to 16.2 percent in 1980.

Table 10

Future productivity projections for Ontario Hydro

	Labour productivity ratio (GWh/employee)	Capital productivity ratio (GWh/$ million)
1976	4.6[a]	16.8[b]
1977	4.4	14.6
1978	4.5	15.0
1979	4.7	15.9
1980	5.0	16.2
1981	–	15.3
1982	–	15.5

[a] 1976 figures based on actual sale.

[b] Capital stock is in constant 1975 dollars. Economic Forecasting Series IV Major Economic Indicators.

Note: Based on Ontario Hydro Financial Forecast (770221) and Ontario Hydro 1977-80 Work Program Budget.

When evaluating investment plans, Ontario Hydro considers expenditures that will improve productivity. Expenditures that are being considered are listed as follows:

– Computerized electrical and mechanical drafting equipment. Estimated cost is $1¾ million, while the expected return is $12 million over a five year period.

– The revamping of Keith generating station

– Improved efficiency at Nanticoke generating station

– Running an experimental automatic mail delivery system on one floor for possible future implementation

– In 1978, the building of a new 4 x 1250 megawatt station.

Criteria for the formation of a capital expenditure budget

The chief determinant of the capital expenditure budget is the load forecast. The budget is largely a reflection of the expenditures necessary to maintain and expand the physical capability for meeting this load. Important influences on the expenditures are the standards set for reliability of service, safety, and environmental impact. An upper limit on total annual expenditures is imposed by the anticipated availability of capital, which is set in the near term by provincial government decree. The choice between technologically viable alternatives for meeting the load in compliance with the established standards and capital constraints is strongly influenced by the goal of minimizing internal economic cost (and, hence, the cost to the customer).

The internal economic cost of available alternatives is compared by discounting cash flows to a present worth, using a discount rate which reflects expected financing costs and financial policy. Capital budgets show expected capital expenditures for five years into the future. In summary, the most important element influencing the approval of a major capital expenditure is the forecast of prospective market demand (the need for the project). The way in which a demonstrated need is met is most strongly influenced by Ontario Hydro's goal of minimizing costs and by the availability of capital to do this.

Deterrents to expenditure programs

There are no deterrents, as such, to consider in approving Ontario Hydro capital expenditure programs – they are better thought of as considerations to bear in mind or constraints to be met. The major deterrents to a capital expenditure program are the uncertainty regarding future demand and the cost of new facilities. Uncertainty regarding the volume of future demand for electricity, given present conditions of changing energy price relationships, is obviously increased by such factors as conservation ethics, load management techniques, inter-fuel substitutions, etc. However, these considerations are hardly a deterrent or constraint to expenditure programs – they merely create an estimation and forecasting difficulty which any corporate planner meets to the best of his ability, given the state of the art. On the other hand, the cost of new capital facilities may not meet the forecast of funds available – either internally generated or otherwise – at any given time. This has been the situation facing Ontario Hydro recently as a result of borrowing constraints placed upon the corporation by the provincial government. This followed their analysis of the impact of Ontario Hydro's estimated borrowing requirements upon the provincial credit rating. The result has been the cancellation and deferment of certain projects designed to meet this constraint and implementation of an investment evaluation procedure designed to correspond with this capital rationing situation.

External influences on capital expenditures

Any changes in government, labour management, and business policies which can be expected to affect the demand for electricity generating capacity would have a bearing upon stimulating the capital spending program of Ontario Hydro assuming: the mandate of Ontario Hydro, as presently interpreted remains unchanged; present system reliability targets and measurement criteria remain unchanged; and only present conventional energy is considered. In particular, although the relationship between forecast growth in GNE and electrical energy utilization may be at worst spurious and at best imprecise, any government, labour-management, or business policies designed to stimulate secular economic growth can be regarded as providing a stimulus to capital spending programmes, other things remaining equal. Such stimulus would include general taxation and monetary policy and their impact at a micro level. Taxation or other policies designed to encourage growth in electricity intensive sectors of the economy would also provide a stimulus at a micro level, etc.

RESEARCH AND DEVELOPMENT

At present, conventional fossil-fueled generation stations have been developed to the point where only a slight improvement in combined efficiency and reliability is foreseen. Increased efficiency for these units would mean either the application of premium cost, clean fuel such as oil or gas, or the use of yet-to-be-developed large-scale coal gasifiers. Research and development is being undertaken to evaluate new technologies that might be utilized to produce electricity.

New generation technologies

Multipurpose plants. Improved efficiency for Ontario Hydro may be obtained by combining heat and power generation. Increased energy costs tend to favour the opportunities for and application of combined heat and power generation, but many other factors must be considered. These include planning and organization, plant and load siting, reliability of heat supply, capital and operating costs, and capital availability. Where high- and low-grade energy industrial applications exist side by side (e.g. the pulp and paper industry), it is often economical to install combined heat and power generating equipment. However, it is not efficient to install this equipment when the demand for low-grade energy substantially exceeds the demand for high-grade energy. The reason for this is that low-grade energy is expensive to distribute and store.

Conversion of solar energy to electrical power. Because of high production costs in Ontario, this is not considered to be a viable alternative in this century.

Wind power. Wind power may be used to save expensive fuels at locations remote from the power grid. However, the low density and unreliability of wind power in Ontario makes this source currently unfeasible.

Fusion power. Ontario Hydro is currently following advances in this technology, although any large-scale production is unlikely in the short and medium term.

Magnetohydrodynamic (MHD). It is unlikely that MHD will be commercially available in Hydro before 1995 because of theoretical inefficiencies and material problems.

New energy technologies

Solar space heating. Ontario Hydro currently feels that the use of solar energy for space heating will have only a negligible effect on the supply of electricity before 1995. Test facilities are now in place and the results of those tests will determine its future feasibility.

Heat pumps. The Canadian Electrical Association is actively involved in the development of a more efficient and reliable heat pump for utilization in the Ontario climate. However, even this improved design will require a long-term storage system or a back-up fuel that can be stored.

Biomass. This has been considered as a source of energy but it will most likely be harvested for the production of food, fibre, or a synthetic clean transportation fuel in lieu of a source of electricity.

THE AUTOMOTIVE PARTS INDUSTRY

In Canada there are currently 462 companies, mainly located in southwestern Ontario, engaged in the manufacture of parts and accessories for motor vehicles. In 1976 their output was valued at roughly $3 billion, and they employed approximately 60,000 people. Exports account for roughly 80 percent of total production. In terms of relative cost the industry in general is fully competitive with U.S. suppliers. The industry consists of two distinct sectors – the original equipment market (OEM) and the aftermarket. The OEM is by far the largest sector and is dominated by the major motor vehicle companies together with eight multinational independent producers. The demand for original equipment parts which is determined mainly by the level of motor vehicle assembly in Canada has grown rapidly over the last ten years.

From 1965-75 motor vehicle assembly increased by 69 percent to a total of 1.4 million vehicles. Over the same period the demand for OEM parts increased by 238 percent to $4.4 billion. Canadian production supplied $1.3 billion of the total – broken down as follows: $498 million by the motor vehicle manufacturers' in-house facilities; $368 million by eight multinational parts producers operating in Canada; and the remaining $334 million from smaller parts producers in Canada. Total Canadian production of OEM parts increased by 262 percent between 1965 and 1975 to a total of $2.5 billion, of which $1.2 billion were exported. Capital investment in the industry increased rapidly since 1965; 50 percent was financed from internally generated funds.

It is estimated that the industry is currently operating at around 85 percent of capacity. Growth in Canadian auto parts demand in the period ahead, under current patterns of production, which are dominated by the major auto manufacturers, is expected to be considerably slower, 6 percent per annum for the domestic market and 2 to 3 percent in foreign markets. The low estimate for foreign sales reflects both foreign tariffs and the practice of foreign auto manufacturers operating in Canada to export mainly completed vehicles and the parts for them. Two other factors limiting the growth potential for Canadian parts manufacturers are a levelling out in the rate of growth in automobile production as the market nears the saturation level and the shift of the Canadian auto industry toward assembly operations rather than integrated production.

The prospective large capital expenditures of the auto industry to meet national goals of clean air, highway safety, and reduced energy use, will be large, around $2 billion annually. Current indications are that only a small percentage of this expenditure will be made in Canada. Part of the reason is that the new production requires expensive, technologically-advanced equipment that produces at high volume, and requires a large steady market to be profitable. Unless changes are made in the Auto Pact to ensure that Canadian parts producers are guaranteed a larger share of the Canadian market (the present gap between Canadian consumption and production being roughly $2 billion), they are unlikely to assume the risk of investing in such high-volume expensive equipment, particularly when its financing would require large borrowing in the capital market.

New capital investment in the auto parts industry is also discouraged by the same factors of business uncertainty, labour unrest, high taxes, and over-regulation by governments that apply to Canadian industry as a whole. As it is, with rapid changes in technology the capital stock employed in the auto parts industry is becoming obsolete and is not being updated because of uncertainty regarding future market demand.

The influence of long-range trends on the prospective volume of business capital investment

The identification of long-term economic and financial trends in the Canadian or world economy must to a considerable degree be a subjective analysis. Over a ten-year period, political events, government policies, and the thrust of technological innovations can play a determining role in the actual course of events. However, within such limitations it is possible to identify certain underlying trends which are likely to persist.

The most reliable trend is that associated with the changing demographic profile. While not infallible, the changing age structure of the population can be forecast over long periods with a high degree of reliability. The Canadian demographic patterns that have particular relevance to capital spending are the following:

– A declining rate of increase in the population growth as a whole and the labour force in particular. This implies a smaller contribution to business growth potential from the labour force and a greater reliance on improvements in productivity. The pressure to increase productivity will induce business to invest more heavily in advanced technology.

– By age groups the fastest-growing segment is the 30-39 age group and to a lesser extent the 20-30 year olds. These are the high-spending, low-savings groups. This group spends heavily on automobile, housing, and durable goods and generally makes liberal use of consumer financing. The financial demands of this sector tend to divert funds out of the savings-investment stream into the consumption stream and make the accumulation of sufficient savings to finance the projected large capital investment requirements of the economy more difficult to achieve. The trend also supports the argument for additional incentives to increase the rate of personal savings.

The prospect of slower world-wide economic growth in the decade ahead, primarily in the developed industrial countries, suggests we are entering an era of intensified international competition as individual countries look to exports to maintain domestic employment. The pressure to increase exports, together with some lowering of tariff and non-tariff barriers to trade by 1979 associated with the current GATT negotiations, will put strict upward limits on the ability of industries to pass along to consumers uncompetitively large cost increases resulting from low productivity or accelerating labour costs. It will also generate increasingly strong import pressure from the United States and low-cost developing countries.

Considerable time will be required to generate a significant volume of export business along the lines suggested. During the build-up period, it is imperative that Canada maintain a favourable tax and regulatory climate to encourage a maximum export flow of resource-based and manufactured products. Current major obstacles to increased export earnings in these two sectors are weak world demand and low prices for mineral products and uncompetitively high costs for manufactured products. There is little government can do to improve world demand or prices for Canadian resource products. It can, however, review and revise its own taxation, regulatory and other policies impinging upon resource-based industries.

The export problems of the manufacturing sector have received more attention from governments in for example, the form of tax relief. But more may be required. Concern has developed over a prospective continuing relative decline in the contribution of the manufacturing sector to domestic activity and indirectly to export growth. By contrast, the service sector is forecast to grow in relative importance. In this connection it should be recognized that to a large degree the service sector receives its impetus for non-inflationary growth from expansion in other sectors of the economy and the export component of the service sector is relatively small and slow-growing. The response to the pressure emanating from differences in the relative growth of the manufacturing and service sectors could develop, and in fact may already be developing, in two directions. The first is increased demands for increased protectionism in the form of higher tariffs, quotas, and subsidies on the one hand and increased export incentives on the other. The second response, contradictory and slower to develop but likely to pick up considerable momentum in the years ahead, is to accelerate efforts to improve productivity and to reorganize industries toward fewer, larger, and more efficient units, supported by increased capital investment and technological research and development. In the developed countries, industrial expansion will increasingly focus on high-technology activities in which their comparative advantage of a sophisticated technological research base can most profitably employ the growing pool of highly-skilled, highly-paid labour. This trend is reinforced by the rapidly growing industrial capability of the developing countries and the thrust of world trade negotiations towards freer access for manufacturing products from the developing countries.

There are a number of well-publicized reasons why Canada must not promote protectionism as its prime response to increasing international competition. The persistent increase in the service component in our current international accounts – currently running at $6½ billion annually and increasing at an annual rate of $700-$800 millions–places a heavy burden on an increased surplus from our merchandise transactions to keep our total balance of payments deficit within manageable financial proportions without driving the external value of the Canadian dollar to an extreme discount with all the inflationary pressures such a discount would generate. In a world sensitive to rising protectionist sentiment, retaliation against imposition by Canada of import controls would be swift and damaging beyond the short-term benefits of such controls. As Canada's principal trading partner, now and in the foreseeable future, the United States could take retaliatory action, a move which on past occasions has been prompt and effective; this fact points up the futility of such an approach as a long-range solution to what promises to be a long-range competitive problem. Specific industries whose solvency and continued existence is threatened by a flood of imports should seek and be granted temporary relief. But it is also vitally important that the time won for these industries by such relief be utilized to restore their competitive position when this is feasible or alternatively to facilitate the orderly transfer of resources out of the industry. The scope for rejuvenation of such industries, given aggressive, imaginative management, is probably greater than appreciated, but such a response is unlikely to develop in an environment of escalating levels of protectionism.

In a broader context, Canada's policy approach to the task of increasing exports in a domestic environment of high relative costs persisting over a number of years, and an international trade environment of severe competition, must focus on improvements in productivity and encouragement of those activities in which there will exist a strong world demand and in which we can develop a competitive advantage based on natural resource endowment, past experience, and research and technological expertise. Such potential growth centres are to be found in such fields as agriculture, resource development, transportation, communication and engineering (both consulting and construction). The expanding markets for such activities are to be found in the fast-growing developing countries that are rapidly moving toward industrial expansion, as well as in industrial countries.

The marketing requirements for tapping the markets for such activities are considerably more sophisticated and complex than required for the more standardized range of exports. Such export contracts tend to be large and in many cases packaged in an arrangement covering everything from engineering studies to financing. Because of their size and the wide range of services such contracts cover, successful bidding demands a consortium approach. Canada has unique advantages in successfully bidding for such contracts which at the present time are barely exploited. It has engineering firms with world-wide reputations for excellence that are in a position to assume over-all management of such projects and to control the subsequent contract bidding for construction, equipment, and material supplies. Canada also has a sophisticated and internationally knowledgeable financial industry in both banking and investment, with the ability to provide both domestic and international funds at competitive rates to finance such projects.

To facilitate developments in this area government might consider: providing a tax environment that is internationally competitive both at the corporate and personal level to allow Canadian companies to grow to competitive international size and to attract and hold the professional and technologically skilled personnel to man and manage such projects. The U.S. government's tax policy, for example, is moving toward a greater recognition of the need to stimulate investment in the private sector by additional tax relief for the corporate sector. It is doubtful that Canada can afford to fall further behind the United States in the tax burden levied (federal, provincial, and municipal) on the business sector, both at the corporate and personal level.

– Government sould review and, if necessary, amend those legal provisions and administrative regulations of the Anti-Combines Act, the Foreign Investment Review Act, and the Competition Act that would hinder the formation or operation of corporate consortia formed to bid on such contracts.

– Government should review the financial support for both basic and applied research at the corporate, as well as at the university or government level.

– Provincial governments should review the professional and skilled manpower needs of such programs and restructure specialized training toward filling these requirements. They should also establish additional high quality technical schools in close co-operation with industry and labour unions to train the highly skilled technical specialists that will be required. Labour legislation should be amended to reduce current impediments on the flow of skilled tradesmen into the labour force.

– The government should broaden the insurance coverage for the assumption of foreign risks such as expropriation and currency depreciation, along the lines of the U.S. Foreign Investment Act, to encourage Canadian consortia to actively seek such business.

In the period ahead the areas of strongest domestic industrial expansion will be those that are capital intensive, such as energy, transportation, communications, petrochemicals, the development and processing of raw materials, and pollution controls. Capital/output ratios for many of these industries have been rising and seem likely to continue to do so in future, and they will increasingly tend to involve some government participation. Nevertheless, the bulk of the financial resources required to fund such projects will be raised in the private sector. Doubts have been expressed about the ability of the private sector to generate the necessary volume of savings to finance the projected level of investment within the present tax structure. Even if one discounts the prospect of an over-all shortage of capital, there still remains a potentially serious short-fall in the volume of savings available for long-term commitment into bond or equity form, particularly the latter, required to fund long-term investment projects.

While government tax policies have been modified to some extent to encourage bond and equity investment, additional incentives may be necessary to assure the required volume of long-term investment. Some progress can be expected in improving the volume of corporate retained earnings through the adoption of some form of inflation accounting and modest reduction in the corporate tax rate. But the degree of corporate tax relief against the background of only modest deceleration in the secular decline in corporate profitability will not likely be sufficient to reduce increasing corporate financial dependence on external financing.

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Appendix A

Tables and Figures

TABLES

A1 Contribution to instability – final domestic demand
A2 Post-war investment cycles
A3 Quarters by which sector peak leads or lags
A4 Size, growth, and instability of demand for construction
A5 Output per dollar of Capital Stock for Canada and the U.S. by major industry groups
A6 Rate of capacity utilization – Canada
A7 Canada: capital/output ratios by sector
A8 A Greenfield Newsprint Mill in Canada
A9 Assumptions on migration, fertility and mortality 1977-87
A10 Population projections for Ontario 1977-87
A11 Population growth for Ontario
A12 Net household formation for Ontario 1977-87
A13 Net housing replacement in Ontario 1977-87
A14 Allowance for vacancies for Ontario 1977-87
A15 Approximate relationships between the mineral industry and the Canadian economy, 1974
A16 Canadian mineral production – growth rates by commodity
A17 Canada's production share of principal world minerals, 1975
A18 Canadian mineral production – growth rates by province
A19 Import tariffs, by stage of processing, in effect in early 1973
A20 Ontario Hydro's peak capacity
A21 Ontario Hydro capital expenditure intentions
A22 Ontario Hydro percentage of capital expenditures that might be financed from internally generated funds
A23 Capital expenditures per additional worker
A24 Total manufacturing industries in Canada
A25 Total manufacturing industries in Canada
A26 Private and public investment, Canada and Ontario, 1950-76
A27 Private and public investment by sector, Ontario, 1950-76
A28 Capital expenditures in manufacturing – Ontario, 1965-77
A29 Capital expenditures – Ontario, 1965-77
A30 Key expenditure aggregates (current $)
A31 Key expenditure aggregates (71 const. $)
A32 Net fixed non-res. capital formation by industry (71 $)
A33 Net lending by sector
A34 Canadian energy supply scenarios
A35 Canadian energy capital expenditure scenarios
A36 Energy sector external financing requirements 1976-90
A37 Energy investment projections

A38 Energy in relation to total investment and output
A39 Sources of gross saving
A40 Net new funds raised in Canadian capital markets

FIGURES

A1 Capacity and output: non-farm producing sector excluding energy-related industries
A2 Rates of return and the cost of capital for nonfinancial corporations
A3 Canada: capital output ratio
A4 United States: capital output ratio
A5 Canadian trade deficit for industrial machinery
A6 Profits as a share of GNP – Canada
A7 Canada – shares of total saving
A8(a) Canada: internal vs. external financing
A8(b) Canada: composition of external financing
A8(c) Canada: industrial corporations debt/equity ratio
A9 Forecast of housing requirements (in thousands)
A10 Forecast of percentage of units by type to accommodate new requirements
A11 Composition of gross fixed capital formation

Table A1

Contribution to instability – final domestic demand

	Consumption	Residential construction	Plant & equipment	Government	% Contribution to instability	Shares
		1950 1 TO 1976 4				
Consumption	1.89735				30.9	59.6
Residential construction	0.72508	0.56132			13.2	4.9
Business investment in plant & equipment	0.88287	0.16755	1.83737		32.1	13.7
Government	–0.11019	0.00678	0.78156	2.95983	27.7	21.8
Adjusting entries	0.05186	0.01294	–0.08302	–0.53755	– 3.9	0
					100	100
		1954 2 TO 1976 4				
Consumption	1.74508				33.3	59.5
Residential construction	0.66449	0.52365			15.1	4.9
Business investment in plant & equipment	1.04537	0.22240	2.07846		34.7	13.6
Government	0.27706	0.32802	0.51999	1.19597	19.3	22.0
Adjusting entries	–0.04025	–0.05870	–0.02442	–0.18462	– 2.4	0
					100	100
		1970 4 TO 1976 4				
Consumption	1.54895				56.0	59.9
Residential construction	0.33299	0.21942			14.6	4.9
Business investment in plant & equipment	0.60749	0.02925	0.70288		34.5	13.5
Government	–0.43756	0.04404	–0.07441	0.36115	– 5.3	21.7
Adjusting entries	0.00462	0.00141	0.00134	–0.00072	0.2	0
					100	100

Perspectives on the Canadian Economy – an analysis of cyclical instability and structural change – page 51 – Conference Board in Canada, commissioned by the Business Council on National Issues. (Preliminary)

Table A2

Post-war investment cycles

Series	Number of cycles	Average duration (quarters)	Average upswing duration	Average downswing duration
Residential construction	6	18.5	13.5	5.0
Non-residential construction	4	53.0	42.5	10.5
Machinery & equipment	4	17.5	10.8	5.8

Source: Toward More Stable Growth in Construction – Economic Council of Canada

Table A3

Quarters by which sector peak leads (+) or lags (–) GNE peak

Recession	Residential construction	Non-residential construction	Machinery & equipment
1948	–1	x	0
1951	+1	x	0
1954	x	–1	+1
1957	+3	–3	–1
1960	+1	+1	0
1970	+2	–1	0
1975	–1	0	0

Sector did not peak within fourth quarters of GNE Peak Statistics Canada

Table A4

Size, growth, and instability of demand for construction by major investment components, 1948-70 (in 1961 dollars)

Construction investment component	Construction investment		Average annual growth rate	Instability	
	Annual averages	Share		Variations from trend	Contribution
	($ Million)	%	%	%	%
Transportation	471	8	3.9	24	18
Government[1]	1,277	23	6.5	11	12
Mining	375	7	8.5	19	9
Utilities	524	9	4.6	12	8
Manufacturing	409	7	4.9	17	8
Services	216	4	8.1	17	7
Finance, insurance and real estate	188	3	8.5	25	4
Trade	157	3	0.3	16	3
Forestry	29	1	2.4	15	1
Construction	13	–	-0.1	21	–
Agriculture	132	2	3.5	13	–
Fisheries	1	–	-3.9	46	–
Residential construction	1,841	33	4.1	11	30
Total construction expenditures	5,633	100			100

Source: Toward More Stable Growth in Construction p. 117 – Economic Council of Canada

Table A5

Output per dollar of Capital Stock (at replacement cost) for Canada and the U.S. by major industry groups 1972

	Canada value added/gross capital stock	Rank	United States value added/gross capital stock	Rank	Percentage difference Canada/U.S.
Food & beverages	.592	14	1.155	10	–47.9
Tobacco products	.973	5	.619	19	77.2
Rubber products	1.037	4	1.374	3	–24.5
Leather products	1.162	3	1.293	7	–10.1
Textile products	.420	15	1.234	9	–66.0
Knitting mills	.904	8	1.106	11	–19.3
Clothing	2.903	1	1.346	5	115.9
Wood products	.684	13	.782	16	–12.5
Furn. & fixtures	1.568	2	1.847	1	–15.2
Paper & allied	.227	19	.923	13	–76.4
Print. pub. & allied	.875	10	1.520	2	–43.4
Primary metal	.267	18	.717	18	–63.8
Metal fabricating	.856	11	1.357	4	–37.0
Machinery	1.027	9	.909	15	12.9
Transportation equip.	.859	12	.756	17	13.6
Electrical prod.	1.062	7	.912	14	16.4
Non-metallic minerals	.411	16	1.257	8	–67.3
Petroleum & coal	.144	20	.276	20	–47.8
Chemical & chem. prod.	.352	17	.990	12	–65.5
Miscellaneous manuf.	1.053	6	1.332	6	–21.0
Total	.521		.969		–46.3

Source: Statistics Canada, Cat. No. 31-203 (1976) 1972 Census of Manufacturers, U.S. Department of Commerce

Table A6

Rate of capacity utilization – Canada

Sector	1st qtr. 1977 (%)	Peak rate (%)	Low rate (%)
Total industrial	84.3	96 1st qtr. 1974	83.7 1st qtr. 1976
Mining	75.2	100 2nd qtr. 1973	74.0 3rd qtr. 1976
Electric power & gas	98.1	100 2nd qtr. 1974	91.4 3rd qtr. 1975
Manufacturing	84.2	96 1st qtr. 1974	83.3 4th qtr. 1976
Food and beverages	85.4	93 4th qtr. 1973	83.1 4th qtr. 1976
Rubber	86.3	95.5 1st qtr. 1974	80.0 2nd qtr. 1975
Leather	73.0	91.5 1st qtr. 1974	73.0 1st qtr. 1977
Textiles	77.3	100 2nd qtr. 1973	77.3 1st qtr. 1977
Clothing	84.2	95.6 1st qtr. 1974	84.2 1st qtr. 1977
Paper and allied	81.8	100 2nd qtr. 1973	61.8 4th qtr. 1975
Printing & publishing	89.4	100 1st qtr. 1974	89.4 1st qtr. 1977
Petroleum and coal	84.3	100 3rd qtr. 1973	78.3 3rd qtr. 1976
Chemicals	96.6	100 1st qtr. 1974	92.3 2nd qtr. 1975
Furniture & fixtures	73.5	100 1st qtr. 1973	73.5 1st qtr. 1977
Primary metals	76.7	93.4 1st qtr. 1974	70.3 4th qtr. 1976
Metal fabricating	90.8	100 3rd qtr. 1973	88.7 3rd qtr. 1975
Machinery	87.1	100 4th qtr. 1973	86.5 3rd qtr. 1976
Transportation	91.8	100 1st qtr. 1973	82.1 1st qtr. 1975
Electric products	75.3	100 2nd qtr. 1974	75.3 1st qtr. 1977
Non-metallic minerals	72.3	90.1 1st qtr. 1974	72.3 1st qtr. 1977
Miscellaneous manufacturing	72.6	100 2nd qtr. 1974	72.6 1st qtr. 1977

Source: Rate of Capacity Utilization – Federal Dept. Industry, Trade and Commerce

Table A7

Canada: capital/output ratios by sector

	Manufacturing	Services	Trade	Transportation	Agriculture	Finance	Construction	Mining	Forestry	Fishing	Utilities	Total
1951	2.1	.8	1.2	6.4	4.3	.6	.7	2.4	1.1	2.8	12.4	2.4
52	2.1	.8	1.2	6.2	3.8	.6	.6	2.6	1.2	3.2	12.7	2.4
53	2.1	.8	1.2	6.4	4.4	.6	.6	2.7	1.4	3.2	13.2	2.4
54	2.2	.8	1.3	6.7	5.9	.7	.6	2.8	1.4	2.9	12.9	2.6
55	2.1	.8	1.2	6.1	5.0	.7	.7	2.7	1.5	3.2	12.2	2.4
56	2.1	.8	1.2	5.7	4.8	.7	.7	2.9	1.5	3.0	11.9	2.4
57	2.3	.8	1.3	6.0	5.8	.7	.7	3.1	1.7	3.3	12.2	2.5
58	2.4	.9	1.3	6.5	5.3	.8	.7	3.2	1.9	2.9	12.0	2.6
59	2.3	.9	1.3	6.3	5.6	.8	.8	3.0	1.8	3.3	11.2	2.6
60	2.4	.9	1.3	6.3	5.5	.9	.8	3.2	1.6	3.5	10.8	2.7
61	2.4	.9	1.4	6.1	6.4	1.0	.8	3.5	1.7	3.3	10.8	2.7
62	2.2	.9	1.3	6.0	5.3	1.0	.8	3.6	1.6	3.3	10.8	2.6
63	2.2	.9	1.3	5.7	4.7	1.0	.8	3.7	1.7	3.6	10.7	2.5
64	2.1	.9	1.3	5.4	5.3	1.0	.7	3.6	1.6	3.7	10.4	2.5
65	2.0	1.0	1.2	5.2	5.2	1.1	.7	3.7	1.7	4.0	10.3	2.4
66	2.0	1.0	1.2	5.0	4.7	1.1	.6	4.0	1.6	3.7	10.1	2.4
67	2.1	1.0	1.2	4.9	5.8	1.2	.6	4.1	1.7	4.5	10.1	2.4
68	2.1	1.0	1.2	4.8	5.6	1.2	.6	4.2	1.8	4.2	10.1	2.4
69	2.0	1.1	1.2	4.6	5.4	1.2	.6	4.5	1.8	4.9	9.9	2.4
70	2.2	1.1	1.2	4.6	5.5	1.2	.6	4.3	1.9	4.9	9.6	2.5
71	2.1	1.1	1.1	4.5	4.9	1.3	.6	4.5	2.0	5.2	9.6	2.4
72	2.1	1.2	1.1	4.3	5.4	1.3	.7	4.6	2.1	5.6	9.2	2.4
73	2.0	1.2	1.1	4.2	5.6	1.3	.7	4.5	1.9	5.4	9.1	2.4

Table A8

A Greenfield Newsprint Mill in Canada

Capital cost (160,000 TPY)	$ 125,000,000
Depreciation	20-yr. straight line
Financing	50% debt at 10%
Annual Sales Revenue Required	
Interest	$ 3,125,000
Debt retirement	3,125,000
Depreciation	6,250,000
Mill costs (approx. $200/ton)	32,000,000
Delivery & selling (approx. $40/ton)	6,400,000
10% after-tax return (20% before tax)	25,000,000
Annual Total	$ 75,900,000
Required selling price	$ 475 per ton
Current selling price	$ 305 per ton
Required price increase	$ 170 per ton

Table A9

Assumptions on migration, fertility and mortality 1977-87

	Projection 1	Projection 2	Projection 3
Net international migration	23,400	58,500	93,600
Net interprovincial migration	–9,400	–9,400	–9,400
Fertility rate*	1.85	1.85	1.85
Mortality rate*	7.4	7.4	7.4

*as of January 1st, 1977

Table A10

Population projections* for Ontario
(in thousands)
1977-87

Year	Projection 1	Projection 2	Projection 3
1977	8317.2	8317.2	8317.2
1978	8395.2	8430.3	8465.3
1979	8474.0	8545.0	8616.1
1980	8553.3	8661.1	8768.9
1981	8633.3	8778.6	8923.9
1982	8713.7	8897.2	9080.7
1983	8794.3	9016.7	9230.2
1984	8874.7	9136.7	9398.6
1985	8954.7	9256.8	9558.9
1986	9033.7	9376.5	9719.2
1987	9111.4	9495.3	9879.2

*as of January 1st, 1977

Table A11

Population growth for Ontario
1977-86

Period	Projection 1	Projection 2	Projection 3
1977-81	3.8	5.5	7.3
1981-86	4.6	6.8	8.9

Table A12

Net household formation for Ontario
1977-87

Year	Projection 1	Projection 2	Projection 3
1977	69,800	80,600	91,400
1978	71,300	82,900	94,500
1979	72,400	84,600	96,900
1980	73,200	86,100	98,900
1981	73,800	87,100	100,400
1982	74,100	87,800	101,500
1983	73,600	87,800	101,800
1984	72,300	86,700	101,200
1985	69,800	84,600	99,300
1986	66,200	81,300	96,500
1987	61,800	77,300	92,800

Table A13

Net housing replacement in Ontario (in units)
1977-87

Year	Net replacement
1977	7000
1978	7200
1979	7400
1980	7700
1981	7900
1982	8100
1983	8300
1984	8500
1985	8600
1986	8900
1987	9100

Table A14

Allowance for vacancies for Ontario (in units)
1977-87

Year	Projection 1	Projection 2	Projection 3
1977	2700	3100	3600
1978	2800	3200	3700
1979	2800	3300	3800
1980	2800	3300	3800
1981	2900	3400	3900
1982	2900	3400	3900
1983	2900	3400	4000
1984	2800	3400	3900
1985	2700	3300	3900
1986	2600	3200	3700
1987	2400	3000	3600

Table A15

Approximate relationships between the mineral industry and the Canadian economy, 1974

	Direct Effects		
Mineral industry activity (less mineral fuels) as % of national economic indicators	Mining (%)	Metallurgical extraction & semi-fabricated products (%)	Total (%)
GNP	2.7	2.9	5.6
Labour force	0.9	1.8	2.7
Wages and salaries	1.2	2.3	3.5
Capital expenditures	3.4	3.7	7.1
Merchandise exports	10.1	10.1	20.2
Merchandise imports	1.6	9.2	10.8

Table A16

Canadian mineral production – growth rates by commodity

	1960-75	1945-60	1945-75
Potash (1963-75)	18.8	–	–
Zinc	10.0	4.2	7.0
Iron ore	6.8	24.6	15.3
Copper	4.6	6.4	5.5
Nickel	4.4	6.9	5.6
Lead	3.8	2.4	3.1
Others	3.3	1.0	2.1
Structural materials	1.6	9.2	5.4
Asbestos	.8	7.6	4.1
National total	4.8	5.6	5.3

Table A17

Canada's production share of principal world minerals, 1975

	Canadian production	Canadian share of world production (%)	Canada's rank among world producers
Iron ore (000 t)	44,893	5.1	7
Nickel (t)	242,180	32.2	1
Copper** (t)	733,826	10.0	4
Zinc** (t)	1,055,151	17.6	1
Asbestos* (t)	1,643,763	40.1	1
Potash,* K_20 equivalent (000 t)	5,776	24.2	2
Gold (kg)	51,433	4.3	3
Silver (kg)	1,234,642	13.5	2
Lead** (t)	349,133	9.7	4
Aluminum metal (t)	887,023	7.0	4

*Asbestos and potash statistics are for 1974
**Mine basis

Table A18

Canadian mineral production – growth rates by province

	1960-75	1945-60	1945-75
New Brunswick	19.8	6.7	13.0
Yukon Territory	15.6	12.4	14.1
Manitoba	11.8	4.3	8.0
Northwest Territories	8.6	29.2	18.5
Newfoundland (1949-75)	8.4	8.0	8.2
Alberta	7.0	11.1	9.0
British Columbia	5.2	3.6	4.4
Saskatchewan	5.1	7.1	6.1
Quebec	1.8	7.0	4.4
Nova Scotia	1.3	7.6	4.4
Ontario	1.3	6.5	3.9
National Total	4.8	5.6	5.3

Table A19

Import tariffs, by stage of processing, in effect in early 1973
(percentages)

		EEC	U.S.	Japan
Iron and steel:	Ores and concentrates	0.0	0.0	0.0
	Unworked	3.7	3.6	5.5
	Semi-manufactured products	6.7	7.8	10.2
Aluminum:	Bauxite	0.0	0.0	0.0
	Alumina	8.8	0.0	0.0
	Unwrought	3.6	4.5	6.8
	Semi-manufactured products	10.9	7.7	14.9
Nickel:	Ores and concentrates	0.0	0.0	0.0
	Unwrought	0.0	2.4	13.4
	Semi-manufactured products	5.1	8.7	12.3
Copper:	Ores and concentrates	0.0	1.7*	0.0
	Unwrought	0.0	3.9	6.6
	Semi-manufactured products	7.4	8.0	16.5
Zinc:	Ores and concentrates	0.0	10.7	0.0
	Unwrought	2.3	11.2	3.3
	Semi-manufactured products	9.2	7.9	10.4
Lead:	Ores and concentrates	0.0	7.6*	0.0
	Unwrought	2.7	9.0	8.4
	Semi-manufactured products	9.2	7.8	15.6
Wood:	Wood and cork in the rough	1.7	2.1	0.3
	Wood-based panels	12.7	12.6	18.0
	Semi-manufactured products	4.4	2.3	5.4
Pulp and paper:	Paper pulp and paper waste	1.0	0.0	3.6
	Paper and paperboard	10.1	5.5	9.2

*Approximate *ad valorem* rates based on the following prices: copper at 46/lb., zinc at 6.3/lb., lead at 9.9/lb. Prices of all these commodities tend to fluctuate dramatically, and this affects the tariff rate as well.

Sources: Ores and concentrates, national tariff schedules; all others, *GATT Tariff Study,* Summary Table No. 2, Tariff and Trade Profiles, by Industrial Product Category.

Table A20

Ontario Hydro's peak capacity

Year	Dependable peak* capacity – MW			Annual energy average MW			Average annual capacity factor %
	E	W	Total	E	W	Total	Total
1974(A)	17324.4	908.1	18232.5	8834.3	605.8	9440.1	51.8
1975(A)	17762.2	904.7	18666.9	9076.7	537.6	9614.3	51.5
1976(A)	18771.8	904.7	19676.5	9741.0	601.9	10342.9	52.6
1977	21540.0	854.7	22394.7	10257.4	694.4	10951.8	48.9
1978	22475 .0	854.7	23329.7	11010.3	726.2	11736.5	50.3
1979	23118.0	904.7	24022.7	11735.5	770.0	12505.5	52.1
1980	23449.0	1059.7	24508.7	12477.1	827.6	13304.7	54.3
1981	24622.0	1164.7	25786.7	13304.5	868.3	14172.8	55.0
1982	26296.0	1014.7	27310.7	14216.9	908.5	15125.4	55.4

*As of December of each year
A – Actual

Table A21

Ontario Hydro capital expenditure intentions

Year	MM$	Percentage change
1977	1,380	
1978	1,590	15.2
1979	2,018	26.9
1980	2,423	20.1
1981	2,842	17.3
1982	3,363	18.3

Source: Comptroller's Division Ontario Hydro

Table A22

Ontario Hydro percentage of capital expenditures that might be financed from internally generated funds

Year	Percentage of Total
1978	24.5
1979	26.0
1980	25.5
1981	25.1
1982	23.7

*Internally Generated Funds = (Net Income Debt Retirement Changes) + Net Depreciation.

Source: Comptroller's Division Ontario Hydro

Table A23

Capital expenditures per additional worker

Year	M$
1977	749
1978	2,100
1979	4,600
1980	1,700

Source: Ontario Hydro's Work Program Budget

Table A24

Total manufacturing industries in Canada

	Rate of return on assets[1]	Weighted average cost of capital	
		Debt & share[2]	Debt & tot. equity[3]
1963	6.96	4.51	5.10
64	7.39	3.98	4.57
65	7.29	4.09	4.39
66	7.10	4.15	5.03
67	6.25	4.45	4.82
68	6.69	5.48	5.74
69	6.95	5.31	5.53
1970	5.69	5.48	5.77
71*	6.63	5.55	5.84
72*	7.02	5.16	5.51
73	8.71	5.43	6.42
74	9.62	7.39	9.42
75	8.30	6.95	10.34
76	7.72	7.22	9.41

*Data for 1972 and later not strictly comparable with earlier data.

[1] Net profit and interest payments (estimated for years 1963-71) over total assets.

[2] Short debt, long debt, share capital weighted by amount raised in current years applied to rate on new demand loans and on 10 industrial bonds, both multiplied by 100-effective tax rate, and reciprocal of TSE P/E ratio.

[3] Short debt, long debt and total shareholders' equity treated as in note 2.

Sources: Statistics Canada, *Industrial Corporations;* Bank of Canada, *Review.*

Table A25

Total manufacturing industries in Canada

Year end	Curr. asset ratio[1]	Quick asset ratio[2]	Long/short debt ratio	Debt/ equity ratio
1962	2.36	1.26	2.97	.42
63	2.32	1.27	2.90	.40
64	2.25	1.23	2.69	.41
65	2.15	1.18	2.57	.45
66	2.05	1.11	2.38	.50
67	2.06	1.12	2.36	.55
68	2.06	1.15	2.43	.53
69	2.03	1.12	2.18	.52
1970	1.99	1.08	2.21	.54
71*	2.02	1.13	2.45	.51
72*	1.87	1.04	2.09	.53
73	1.82	1.01	1.75	.50
74	1.69	.87	1.41	.51
75	1.77	.93	1.63	.50
76	1.77	.92	1.75	.50

*Data for 1972 and later years are not strictly comparable with earlier data.

[1] Ratio of current assets to current liabilities.

[2] Ratio of current assets less inventories to current liabilities.

Source: Statistics Canada, *Industrial Corporations,* 1962-1969; Fourth Quarter 1971; Fourth Quarter 1975; First Quarter 1977.

Table A26

Private and public investment, Canada and Ontario, 1950-76*

	Construction			New machinery and equipment			Total new capital		
	Canada	Ontario	Ontario as % of Canada	Canada	Ontario	Ontario as % of Canada	Canada	Ontario	Ontario as % of Canada
				Capital Expenditures – $ Million					
1950	2,453	895	36.5	1,483	524	35.3	3,823	1,419	37.1
1951	2,871	1,023	35.6	1,868	717	38.4	4,408	1,740	39.5
1952	3,434	1,137	33.1	2,057	762	37.0	5,491	1,899	34.6
1953	3,756	1,276	34.0	2,220	830	37.4	5,976	2,106	35.2
1954	3,818	1,317	34.5	1,984	772	38.9	5,802	2,089	36.0
1955	4,456	1,486	33.3	2,075	785	37.8	6,531	2,271	34.8
1956	5,435	1,788	32.9	2,761	1,054	38.2	8,196	2,842	34.7
1957	5,880	2,067	35.2	2,933	1,199	40.9	8,813	3,266	37.1
1958	5,954	2,144	36.0	2,534	960	37.9	8,488	3,104	36.6
1959	5,792	1,904	32.9	2,708	966	36.8	8,500	2,900	34.1
1960	5,519	1,828	33.1	2,809	1,028	36.6	8,328	2,856	34.3
1961	5,630	1,794	31.9	2,662	1,000	37.7	8,292	2,794	33.7
1962	5,834	1,936	33.2	2,935	1,118	38.1	8,769	3,054	34.8
1963	6,156	2,088	33.9	3,242	1,194	36.8	9,398	3,282	34.9
1964	7,032	2,249	32.0	3,948	1,498	37.9	10,980	3,747	34.1
1965	8,175	2,533	31.0	4,760	1,846	38.8	12,935	4,378	33.8
1966	9,281	3,088	33.2	5,807	2,173	37.4	15,088	5,261	34.9
1967	9,474	3,173	33.5	5,874	2,185	37.2	15,348	5,357	34.9
1968	9,909	3,485	35.2	5,546	2,094	37.7	15,455	5,579	36.1
1969	10,824	3,825	35.3	6,103	2,482	40.7	16,927	6,308	37.3
1970	11,319	4,127	36.5	6,479	2,801	43.2	17,798	6,928	38.9
1971	13,274	4,662	35.1	6,910	2,798	40.5	20,184	7,460	37.0
1972	14,470	5,253	36.3	7,748	2,984	38.5	22,218	8,237	37.1
1973	16,953	5,981	35.3	9,666	3,734	38.6	26,618	9,715	36.5
1974	20,771	7,088	34.1	12,111	4,728	39.0	32,882	11,816	35.9
1975	23,894	7,481	31.3	14,103	5,551	39.4	37,997	13,032	34.3
1976	26,810	8,157	30.4	15,144	5,984	39.5	41,954	14,140	33.7

*Preliminary actual 1975, intentions 1976.

Source: SC. *Private and Public Investment in Canada.*

Table A27

Private and public investment by sector, Ontario, 1950-76[1]

	Primary industries and construction			Manufacturing			Utilities		
	Const.	New mach.	Total	Const.	New mach.	Total	Const.	New mach.	Total
				Capital Expenditures—$ Million					
1950	45	152	197	56	162	218	201	114	315
1951	44	168	212	138	257	395	188	173	361
1952	44	145	189	158	319	477	220	177	397
1953	45	149	194	169	330	499	235	209	444
1954	66	138	204	124	292	416	198	195	393
1955	75	184	259	121	291	412	188	159	347
1956	144	230	374	189	441	630	284	217	501
1957	182	238	420	219	456	675	460	325	785
1958	83	184	267	159	344	503	506	256	762
1959	67	171	238	132	371	503	322	267	589
1960	64	169	233	147	408	555	315	241	556
1961	70	155	225	125	409	534	291	227	518
1962	76	157	233	175	473	648	280	241	520
1963	87	186	273	170	497	667	308	259	567
1964	82	222	304	205	700	905	329	284	613
1965	106	254	360	280	902	1,182	310	380	690
1966	197	308	506	389	1,031	1,420	410	425	836
1967	195	342	537	315	895	1,210	400	494	894
1968	173	326	499	258	742	1,000	473	557	1,031
1969	161	344	505	314	943	1,256	513	638	1,151
1970	214	357	570	440	1,185	1,625	649	685	1,334
1971	213	394	607	312	1,020	1,332	763	791	1,554
1972	215	443	658	314	1,027	1,341	822	764	1,586
1973	229	493	721	372	1,263	1,635	773	1,033	1,806
1974	294	604	898	570	1,683	2,253	902	1,225	2,127
1975	357	718	1,075	766	2,085	2,851	1,149	1,486	2,635
1976	402	851	1,253	955	2,305	3,260	1,127	1,471	2,597

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1) Preliminary actual 1975, intentions 1976.

Table A27 (continued)

Private and public investment by sector, Ontario, 1950-76[1]

	Trade, finance & commercial serv.			Housing	Institutions & government depts.			Total		
	Const.	New mach.	Total	Total[2]	Const.	New mach.	Total	Const.	New mach.	Total
	Capital Expenditures—$ Million									
1950	91	76	167	318	184	21	205	895	524	1,419
1951	86	89	175	333	234	30	264	1,023	717	1,740
1952	64	73	137	310	341	49	390	1,137	762	1,899
1953	121	97	218	400	305	45	350	1,276	830	2,106
1954	146	109	255	485	298	38	336	1,317	772	2,089
1955	143	118	261	606	353	34	387	1,486	785	2,271
1956	147	124	271	602	424	42	466	1,788	1,054	2,842
1957	169	140	309	559	478	40	518	2,067	1,199	3,266
1958	162	123	285	718	516	53	569	2,144	960	3,104
1959	163	134	297	663	558	53	611	1,904	996	2,900
1960	169	150	319	551	581	59	640	1,828	1,028	2,856
1961	165	148	313	543	599	61	660	1,794	1,000	2,794
1962	163	164	328	562	679	83	763	1,936	1,118	3,054
1963	161	170	331	599	763	82	845	2,088	1,194	3,282
1964	205	195	399	774	655	98	752	2,249	1,498	3,747
1965	248	212	460	803	786	98	884	2,533	1,846	4,378
1966	280	270	551	876	935	137	1,073	3,088	2,173	5,261
1967	307	310	617	921	1,035	144	1,179	3,173	2,185	5,357
1968	285	308	593	1,184	1,111	159	1,271	3,484	2,094	5,579
1969	296	410	706	1,425	1,116	148	1,264	3,825	2,482	6,308
1970	388	424	811	1,287	1,150	150	1,300	4,127	2,801	6,928
1971	469	416	884	1,642	1,263	179	1,441	4,662	2,798	7,460
1972	564	547	1,111	2,037	1,302	202	1,504	5,253	2,984	8,237
1973	749	711	1,460	2,577	1,282	234	1,516	5,981	3,734	9,715
1974	884	898	1,782	2,872	1,566	319	1,885	7,088	4,728	11,816
1975	836	926	1,762	2,577	1,796	336	2,132	7,481	5,551	13,032
1976	699	1,022	1,721	3,122	1,853	336	2,189	8,157	5,984	14,140

2) The housing category consists of construction only.
Source: SC, *Private and Public Investment in Canada.*

Table A28

Capital expenditures in manufacturing – Ontario 1965-77 ($ million)

Year	Food and beverages		Rubber		Textiles		Clothing and knitting		Wood		Furniture and fixtures		Paper		Printing and publishing	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
1965	86	–	18	56	65	66	6	32	14	18	8	50	108	26	22	44
1966	100	43	26	53	63	58	11	46	15	21	10	50	91	16	26	46
1967	93	41	22	76	45	61	5	29	11	18	10	50	80	17	22	48
1968	112	37	26	74	33	57	5	24	11	15	6	32	58	20	27	54
1969	114	44	33	66	38	49	6	20	22	15	6	50	65	17	35	62
1970	126	41	27	48	33	41	5	21	19	63	9	56	101	19	36	55
1971	104	36	17	18	31	41	5	19	15	10	5	36	99	18	44	61
1972	111	39	4	59	42	45	7	19	21	17	7	37	66	15	34	52
1973	154	43	67	54	55	49	8	17	49	18	15	47	83	21	45	58
1974	171	41	74	54	46	33	11	30	71	25	19	44	153	28	52	60
1975	156	39	62	50	63	39	15	44	61	23	14	47	205	36	56	59
1976[1]	175	42	53	60	57	55	6	24	36	16	7	35	288	40	49	55
1977[1]	188	39	68	67	44	51	9	32	44	19	7	35	269	31	45	46

[1] 1976 preliminary actual; 1977 intentions – Public and Private Investment in Canada – Statistics Canada

A $ million

B Percentage of Canadian total

Table A28 (continued)

Capital expenditures in manufacturing – Ontario 1965-77 ($ million)

Primary metals		Metal fabricating		Machinery		Trans-portation		Elec-trical		Non-metallic minerals		Petroleum and coal		Chemicals	
A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
22	44	77	71	35	70	176	79	41	62	39	36	16	39	156	56
26	46	90	67	47	77	208	86	66	61	85	53	40	62	139	49
22	48	76	67	47	80	157	81	65	68	81	67	44	44	87	32
27	54	65	59	38	78	100	76	40	58	55	64	36	28	67	23
35	62	96	73	45	76	148	83	54	61	56	46	24	18	18	50
36	55	97	73	53	73	216	85	65	67	85	63	22	10	161	60
44	61	72	65	32	63	106	76	59	56	40	50	34	15	131	57
34	51	77	65	38	66	96	73	61	68	83	64	65	27	133	61
45	58	97	59	61	68	147	77	80	63	104	55	94	29	131	45
52	60	132	63	81	65	225	74	87	63	70	40	106	25	275	47
56	59	123	59	88	58	205	74	87	63	108	54	132	29	661	68
49	55	104	58	71	60	144	77	94	64	105	44	215	61	835	75
45	46	116	62	87	66	241	82	94	61	98	36	272	66	825	62

Table A29

Capital expenditures – Ontario 1965-77 ($ million)

Year	Primary industries		Manufactures		Utilities		Trade and financial		Institutional and government	
	A	B	A	B	A	B	A	B	A	B
1965	359	18	1182	51	690	28	460	36	884	33
1966	506	21	1420	51	836	29	551	38	1073	33
1967	537	21	1210	48	894	28	617	40	1179	36
1968	499	21	1000	45	1030	32	593	40	1271	38
1969	505	20	1256	48	1151	35	706	43	1264	37
1970	570	45	1625	50	1334	37	811	46	1300	37
1971	607	20	1332	44	1554	39	884	46	1441	35
1972	658	20	1341	45	1586	37	1111	42	1504	35
1973	721	19	1635	44	1805	35	1460	42	1516	34
1974	898	19	4950	45	2127	34	1781	41	1885	33
1975	1051	18	5521	52	2681	33	1771	34	2003	31
1976[1]	1202	17	5272	56	2587	31	1721	35	2030	31
1977[1]	1238	16	6077	53	2523	26	1664	35	2095	29

[1] 1976 preliminary actual; 1977 intentions – Private and Public Investment in Canada – Statistics Canada

A Ontario expenditures

B Ontario percentage of Canada

Table A30

Key expenditure aggregates (current $)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Personal expenditures	62208	71278	83441	97016	110543	122958	138362	154728	171213	188819	208905
on cons. goods and services	11.9	14.6	17.1	16.3	13.9	11.2	12.5	11.8	10.7	10.3	10.6
Government expenditures	20291	23037	27797	33553	38641	42312	46832	52206	58129	64554	71529
on goods and services	10.5	13.5	20.7	20.7	15.2	9.5	10.7	11.5	11.3	11.1	10.8
Gross capital formantion											
Plant and equipment	17207	20437	25461	30787	32026	35731	40799	48348	58839	69096	75853
	7.8	18.8	24.6	20.9	4.0	11.6	14.2	18.5	21.7	17.4	9.8
Res. construction	5844	7411	8799	9333	12283	12944	15370	18078	18776	20491	22298
	20.9	26.8	18.7	6.1	31.6	5.4	18.7	17.6	3.9	9.1	8.8
Total	23051	27848	34260	40120	44309	48675	56169	66426	77615	89587	98151
	10.8	20.8	23.0	17.1	10.4	9.9	15.4	18.3	16.8	15.4	9.6
Final domestic demand	105550	122163	145498	170689	193493	213945	241362	273360	306958	342960	378586
	11.4	15.7	19.1	17.3	13.4	10.6	12.8	13.3	12.3	11.7	10.4
Exports of goods and services	24580	30718	38930	40364	45385	51236	58247	65059	73385	82829	93665
	10.8	25.0	26.7	3.7	12.4	12.9	13.7	11.7	12.8	12.9	13.1
Deduct: imports of goods and	−25250	−30954	−41006	−45533	−50094	−56271	−64244	−74097	−85011	−96124	−104968
services	14.7	22.6	32.5	11.0	10.0	12.3	14.2	15.3	14.7	13.1	9.2
Final demand	104880	121927	143422	165520	188784	208911	235366	264322	295331	329665	367283
	10.5	16.3	17.6	15.4	14.1	10.7	12.7	12.3	11.7	11.6	11.4
Value of physical change in inventories	544	1588	3052	−247	2112	433	900	900	1500	1800	2100
Residual error	−190	45	701	172	−869	−435	0	0	0	0	0
Gross national expenditures	105234	123560	147175	165445	190027	208909	236266	265222	296831	331465	369383
	11.4	17.4	19.1	12.4	14.9	9.9	13.1	12.3	11.9	11.7	11.4

Aeric – Capital Spending Model, August 1977

Table A31

Key expenditure aggregates (71 const. $)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Personal expenditures on cons. goods and services	59841	63879	67357	70784	75105	77927	82492	87599	92858	98279	104521
	7.6	6.7	5.4	5.1	6.1	3.8	5.9	6.2	6.0	5.8	6.4
Government expenditures on goods and services	18930	19795	20656	21571	21757	22181	23068	23991	24951	25949	26986
	3.1	4.6	4.3	4.4	0.9	1.9	4.0	4.0	4.0	4.0	4.0
Gross capital formation											
Plant and equipment	16500	18398	19774	21182	20412	20926	22081	24455	27984	31062	32392
	3.3	11.5	7.5	7.1	−3.6	2.5	5.5	10.8	14.4	11.0	4.3
Res. construction	5455	5986	5958	5562	6537	6306	6880	7519	7288	7447	7609
	12.8	9.7	−0.5	−6.6	17.5	−3.5	9.1	9.3	−3.1	2.2	2.2
Total	21955	24384	25732	26744	26949	27232	28961	31974	35273	38509	40001
	5.6	11.1	5.5	3.9	0.8	1.1	6.3	10.4	10.3	9.2	3.9
Final domestic demand	100726	108058	113745	119099	123811	127340	134521	143563	153061	162736	171508
	6.3	7.3	5.3	4.7	4.0	2.9	5.6	6.7	6.6	6.3	5.4
Exports of goods and services	23655	26156	25570	23930	26060	27787	29219	31101	33105	35238	37508
	6.6	10.6	−2.2	−6.4	8.9	6.6	5.2	6.4	6.4	6.4	6.4
Deduct: imports of goods and services	−24489	−27824	−30453	−29707	−32132	−33132	−34871	−37907	−41184	−44266	−46037
	11.2	13.6	9.4	−2.4	8.2	3.1	5.2	8.7	8.6	7.5	4.0
Final demand	99892	106390	108862	113322	117739	121995	128869	136757	145002	153707	162979
	5.2	6.5	2.3	4.1	3.9	3.6	5.6	6.1	6.0	6.0	6.0
Value of physical change in inventories	515	1346	2334	−526	1257	145	450	450	575	750	900
Residual error	−159	76	570	159	−512	−256	0	0	0	0	0
Gross national expenditures	100248	107812	111766	112955	118484	121884	129319	137207	145577	154457	163879
	6.1	7.5	3.7	1.1	4.9	2.9	6.1	6.1	6.1	6.1	6.1

Aeric – Capital Spending Model, August 1977

Table A32

Net fixed non-res. capital formation by industry (71 $)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Agriculture	232	464	552	720	744	207	134	18	455	29	200
Forestry	26	72	96	26	15	98	62	78	132	124	138
Fishing and trapping	–5	–6	–15	–17	–18	0	13	13	13	15	15
Mining	798	705	777	943	1247	1281	1146	1190	1696	1886	2804
Manufacturing	926	1330	1791	1537	1433	1489	2220	2648	2378	2773	2521
Construction	76	100	94	60	83	–74	127	222	179	188	136
Utilities	1275	1564	1562	1915	2038	2164	2285	2151	2426	2824	3660
Goods producing industries	3326	4229	4857	5183	5542	5165	5987	6320	7279	7839	9473
Transportation storage & communications	950	1167	1234	1183	1072	1114	1224	2556	3322	4010	876
Trade	223	297	355	231	220	273	346	434	444	449	407
Finance, insurance and real estate	645	870	967	939	818	800	1141	1268	1279	1406	1709
Other services	626	803	929	1193	862	914	1091	1134	1383	1414	1469
Commercial service producing industries	2444	3136	3485	3546	2972	3102	3802	5392	6429	7280	4460
Non-commer. industries	2301	2086	2222	2449	2194	2260	1398	1842	2906	3089	3665
Total	8071	9451	10563	11178	10708	10528	11187	13553	16615	18208	17598

Aeric – Capital Spending Model, August 1977

Table A33

Net lending by sector

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Persons and unincorporated business	3510	4609	7263	8338	7837	10148	8104	7278	7556	9574	10210
Corporations and government business enterprises	–3977	–5753	–11470	–9349	–8660	–11910	–14385	–17420	–20271	–25674	–26108
Government	81	1252	2694	–3768	–3364	–3653	–48	759	739	2455	4245
Non residents	386	–108	1513	4779	4187	5415	6328	9383	11976	13645	11652

Aeric – Capital Spending Model, August 1977

Table A34

Canadian energy supply scenarios

				Scenario A					
Year	Oil			Gas				Coal	Electricity
	Thousands of barrels daily			Millions of cubic feet per day				Millions of tons per year	Capacity in megawatts
	Conventional[1]	Oil sands and heavy oils	Frontier	Conventional[1]	Mackenzie delta	Arctic Islands	East Coast		
1975	1737	43		6900				27.7	59540
1980	1472	153		8150				44.9	72400
1985	1136	274		8565	1650	1200	150	80.5	97800
1990	736	444	500	6475	2250	3500	250	118.1	125200
				Scenario C					
1975	1737	43		6900				27.7	59540
1980	1472	258		8150				44.9	79100
1985	1136	432		8565		1200	150	80.5	111100
1900	736	1012		6475		3500	250	118.1	151800

[1] Figures refer to productibility rather than production

Table A35

Canadian energy capital expenditure scenarios
millions of 1975 dollars

Year	Petroleum exploration and development	Oil sands and heavy oils	Refining	Natural gas & oil marketing distribution	Pipelines	Coal	Electric power	Total energy
Scenario A								
1976-80	10580	2995	1430	2510	5710	780	21700	45705
1981-85	15450	2275	1035	3080	19205	1485	32300	74830
1986-90	14240	305	1340	3455	3045	990	37200	60575
Total	40270	5575	3805	9045	27960	3255	91200	181110
Scenario C								
1976-80	8320	2345	1430	2510	2445	780	24400	42050
1981-85	8700	6775	1035	3080	11465	1485	36190	68730
1986-90	6260	5650	1340	3455	2810	990	49410	69915
Total	23280	14770	3805	9045	16720	3255	110000	180695

Table A36

Energy sector external financing requirements[1] 1976-90 (millions of $ 1975)

	Scenario A				Scenario C			
	1976-80	1981-85	1986-90	Total	1976-80	1981-85	1986-90	Total
Petroleum	4,290	4,165	(1,340)	7,115	2,510	4,765	625	7,900
Pipelines	5,710	20,420	(2,165)	23,965	2,030	12,290	640	14,960
Electricity	18,600	36,200	48,600	103,400	22,300	38,400	63,300	124,00
Total	28,600	60,785	45,095	134,480	26,840	55,455	64,565	146,860

[1] Energy mining industries are not included in this table because their external financing requirements are relatively insignificant.

Table A37

Energy investment projections (millions of current dollars)

	1976	1977	1978	1979	1980	1981	1982
Petroleum and gas exploration and development	2,270	2,700	2,750	3,200	3,800	4,850	5,600
Coal and uranium extraction	190	220	270	380	480	720	950
Electric power generation and gas utilities	4,551	5,710	6,500	7,400	8,300	9,350	10,600
Pipelines	342	380	450	600	1,900	2,150	2,000
Petroleum and gas products (manufacturing and refining)	355	410	300	225	225	250	275
Total	7,708	9,420	10,270	11,805	14,705	17,320	19,425
(per cent change)	(15.0)	(22.2)	(9.0)	(14.9)	(24.6)	(17.8)	(12.2)

Sources: Statistics Canada; Canadian Imperial Bank of Commerce

Table A38

Energy in relation to total investment and output (millions of current dollars)

	1976	1977	1978	1979	1980	1981	1982
Energy investment	7,708	9,400	10,270	11,805	14,705	17,320	19,425
Total capital investment	44,309	47,765	53,083	60,810	70,030	80,525	90,453
GNP	190,020	207,880	233,090	264,220	296,860	332,670	364,840
Capital investment as per cent of GNP	23.3	23.0	22.8	23.0	23.6	24.2	24.8
Energy investment as per cent of:							
total investment	17.4	19.7	19.4	19.4	21.0	21.5	21.5
GNP	4.1	4.5	4.4	4.5	5.0	5.2	5.3

Sources: Statistics Canada; Canadian Imperial Bank of Commerce

Table A39

Sources of gross saving

	1976	1977	1978	1979	1980	1981	1982
Personal savings	13,398	13,627	14,100	15,510	17,100	18,880	20,770
		1.7	3.5	10.0	10.3	10.4	10.0
Undist. corp. prof.	7,322	8,770	10,100	12,100	14,100	16,320	18,770
		19.8	15.2	19.8	16.5	15.7	15.0
I.V.A.	−2028	−3227	−3500	−3400	−3200	−3500	−3700
Government	329	0	610	1,000	2,230	2,500	2,600
Non-res.	4,733	5,210	5,570	6,300	6,600	7,500	7,700
		10.1	6.9	13.1	4.8	13.6	2.7
CCA & misc.	21,798	24,286	27,200	30,500	34,500	39,700	45,310
		11.4	12.0	12.1	13.1	15.1	14.1
Total saving	45,552	48,666	54,080	62,010	71,330	81,400	91,450
	Disposition of gross saving						
Gross fixed	44,309	47,765	53,080	60,810	70,030	80,530	90,450
		7.8	11.1	14.6	15.2	15	12.3
Res. const.	12,283	12,717	13,930	16,300	18,330	19,850	20,870
		3.5	9.6	17.0	12.4	8.2	5.2
Non-res.	17,439	19,000	21,280	24,240	27,950	32,990	38,580
		8.9	12.0	13.9	15.3	18.0	16.9
M & E	14,587	16,048	17,870	20,270	23,740	27,690	31,000
Invent.	1,243	901	1,000	1,200	1,300	870	1,000

Table A40

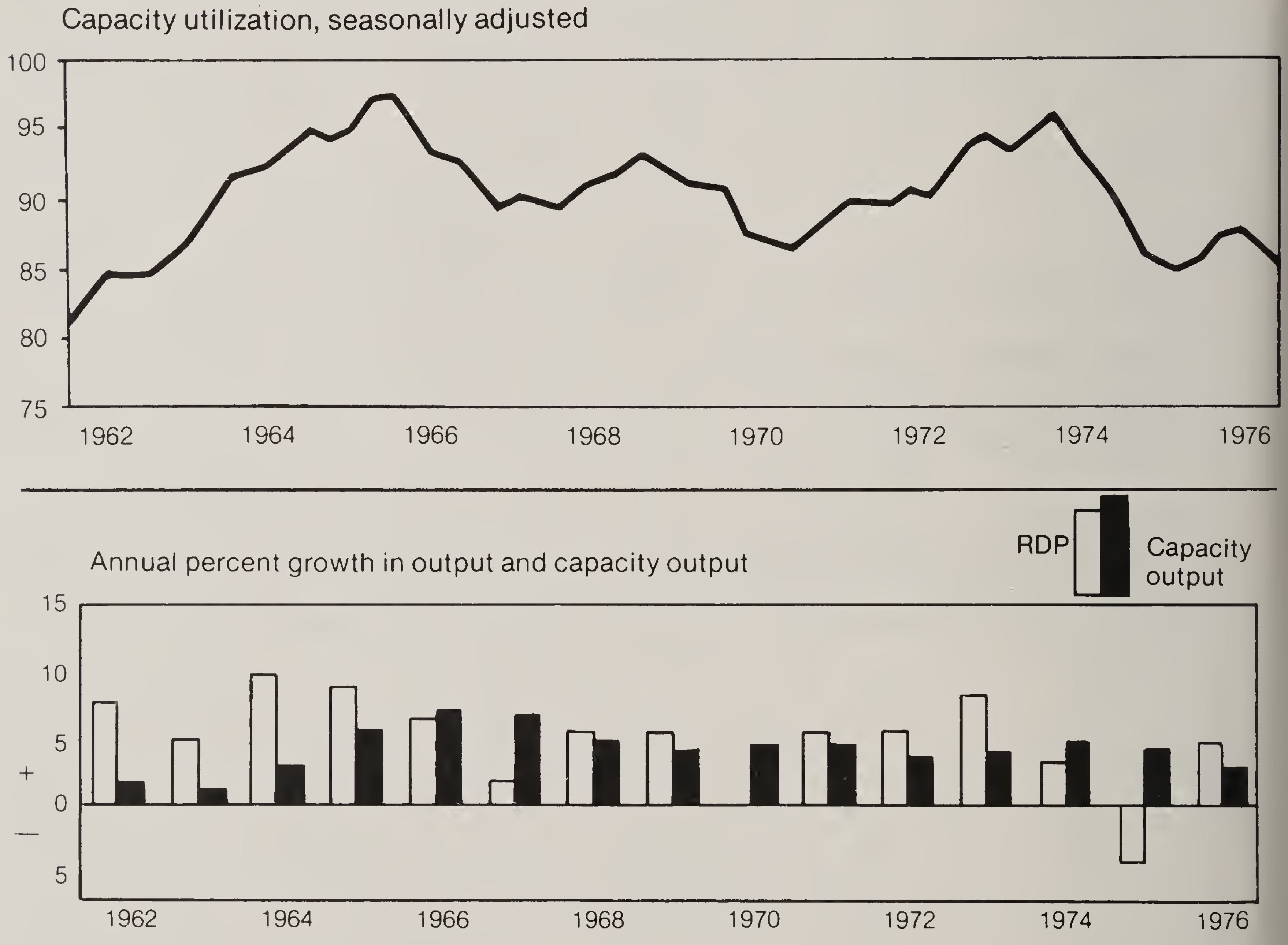
Net new funds raised in Canadian capital markets
($ millions; annual averages for related time periods)

		1956-65	1966-70	1971-77	1978-82F
Bonds	– public sector*	879	1,238	3,085	7,500
	– private sector	430	624	1,818	3,500
Stocks		337	527	927	2,200
Total		1,646	2,389	5,830	13,200
Total as a per cent of GNP		4.0	3.3	4.0	4.5
Bonds	– public sector	212	693	2,156	4,000
	– private sector	205	352	807	2,500
Stocks		2	56	24	30
Total		419	1,101	2,987	6,530
Total as a per cent of GNP		1.0	1.5	2.0	2.2
Energy industry financing as percent of total private financing (domestic & foreign)		n.a	18.4	10.1	17.3

F = forecast
*excludes Canada Savings Bonds and Canada and Quebec Pension Plans
n.a. = not available
Source: calculated from Bank of Canada Review, Tables 29, 30 and A14

Figure A1

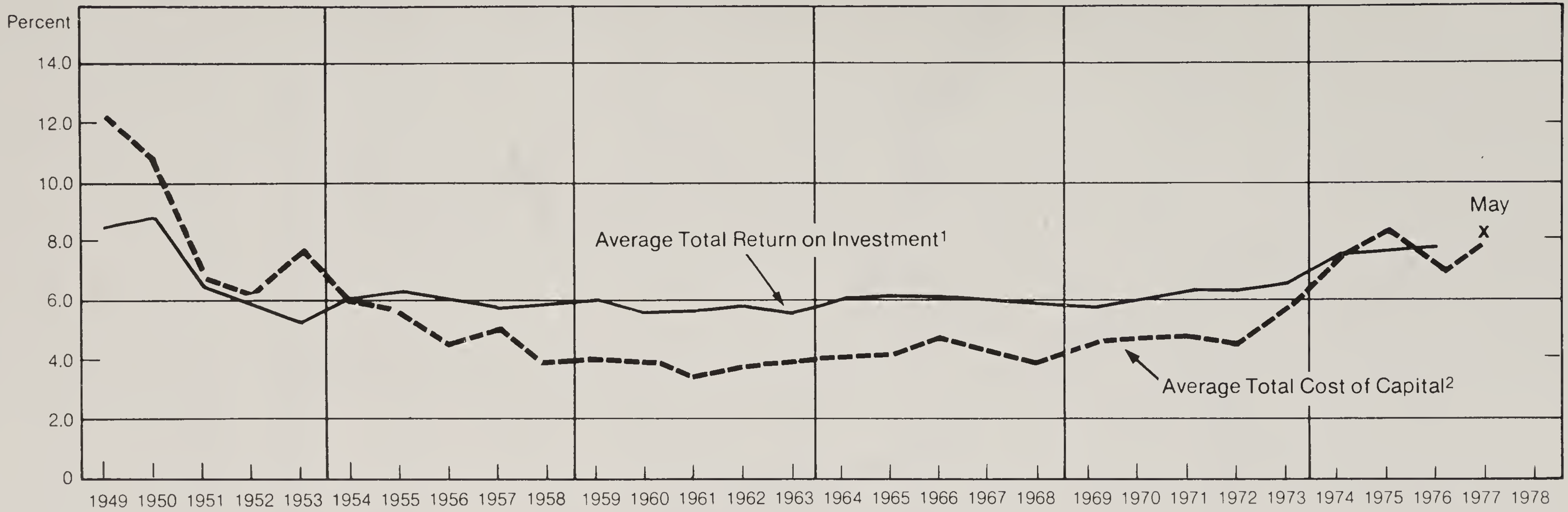
Capacity and output: non-farm goods producing sector excluding energy-related industries



Source: Capacity utilization in Canada, an update, Warren Jestin, Bank of Canada Review June, 1977

Figure A2

Rates of return and the cost of capital for nonfinancial corporations



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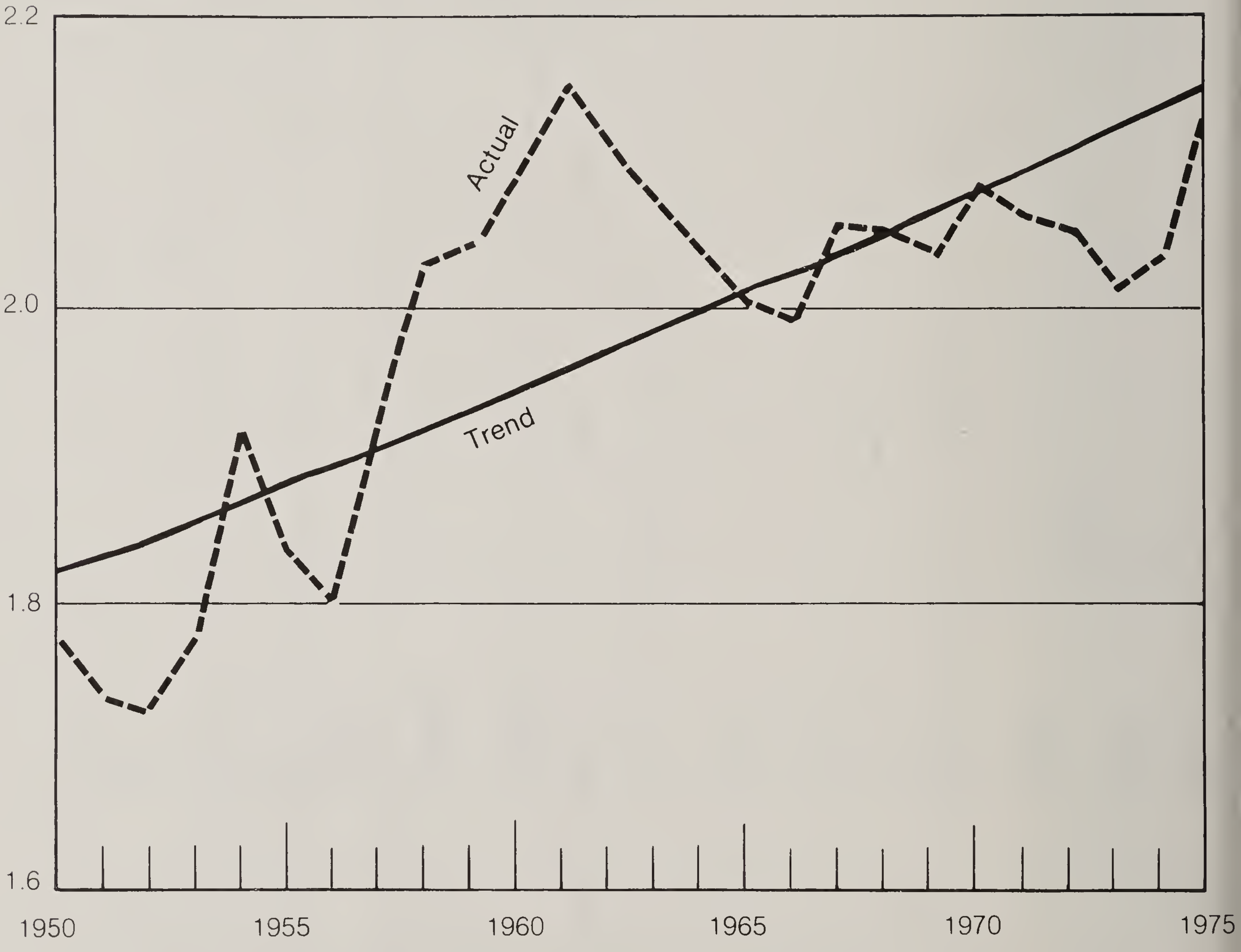
[1] After-tax profits (including inventory profits) plus gross interest paid divided by total assets of all non-financial corporations, all in historical costs. Return is normalized to average capacity utilization.

[2] Equity earnings-price ratio, Aaa bond rate, prime bank rate weighted by equity portion of financing, bond portion, and short-term debt portion, respectively. Bond and prime rate multiplied by 1.0 minus the corporate effective tax rate.

Sources: U.S. Department of Commerce, Board of Governors of the Federal Reserve System; Standard & Poor's Corp.; Moody's Investors Services, Inc.

Figure A3
Canada: capital output ratio



Source: Statistics Canada; The Conference Board in Canada

Figure A4

United States: capital output ratio

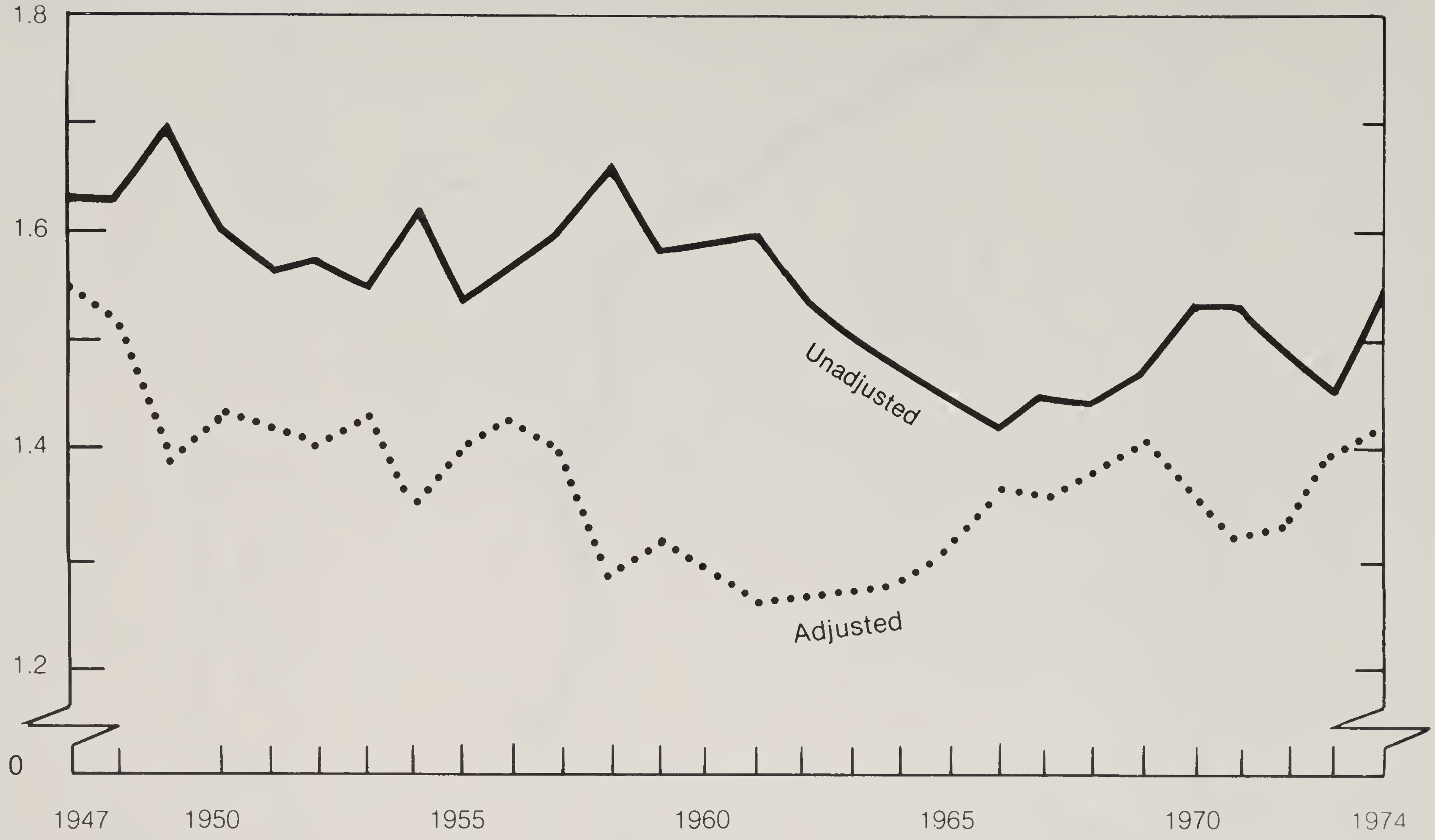
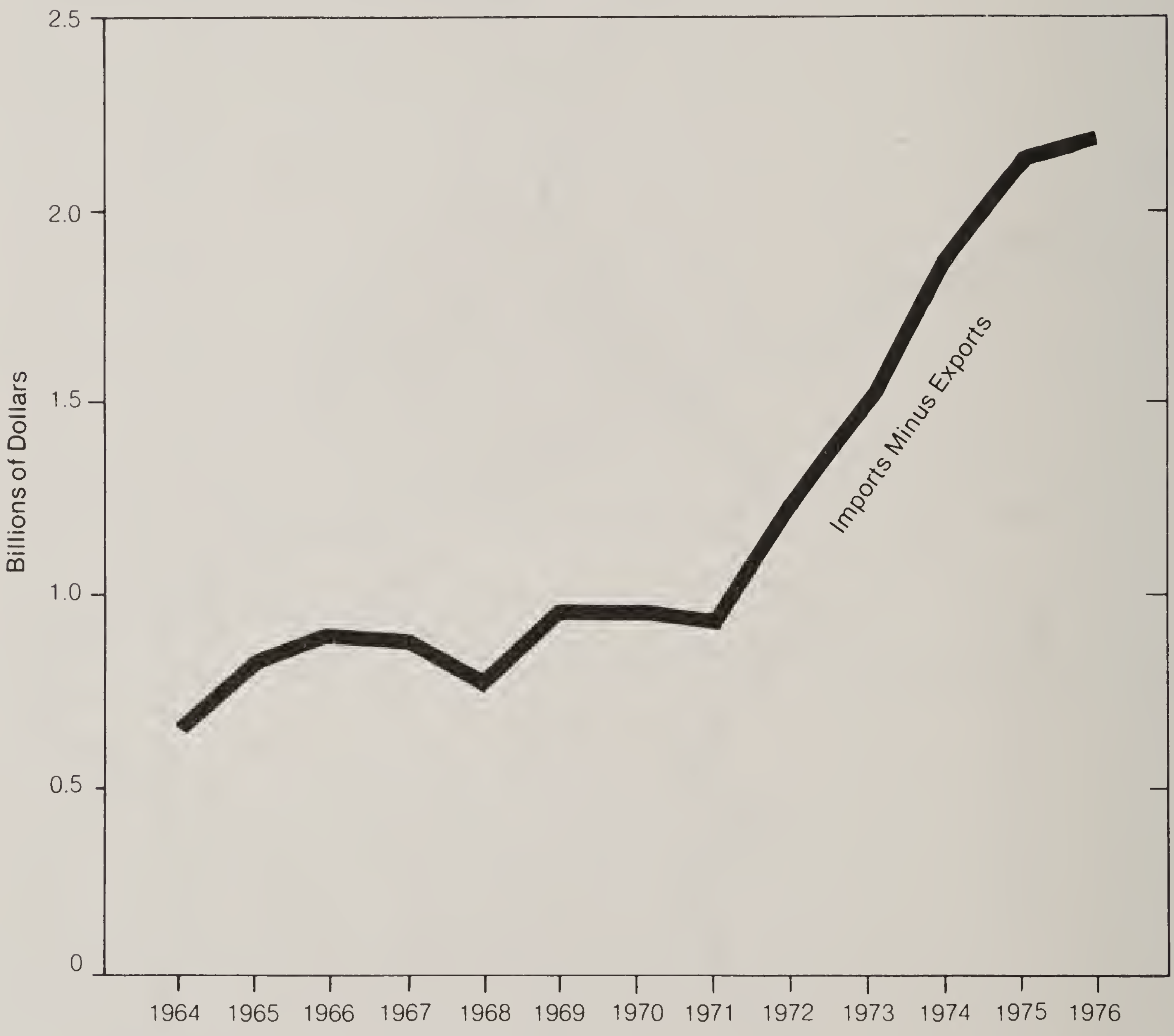


Figure A5
Canadian trade deficit for industrial machinery



Source: Statistics Canada (SIC 315 Group)

Figure A6
Profits as a share of GNP – Canada

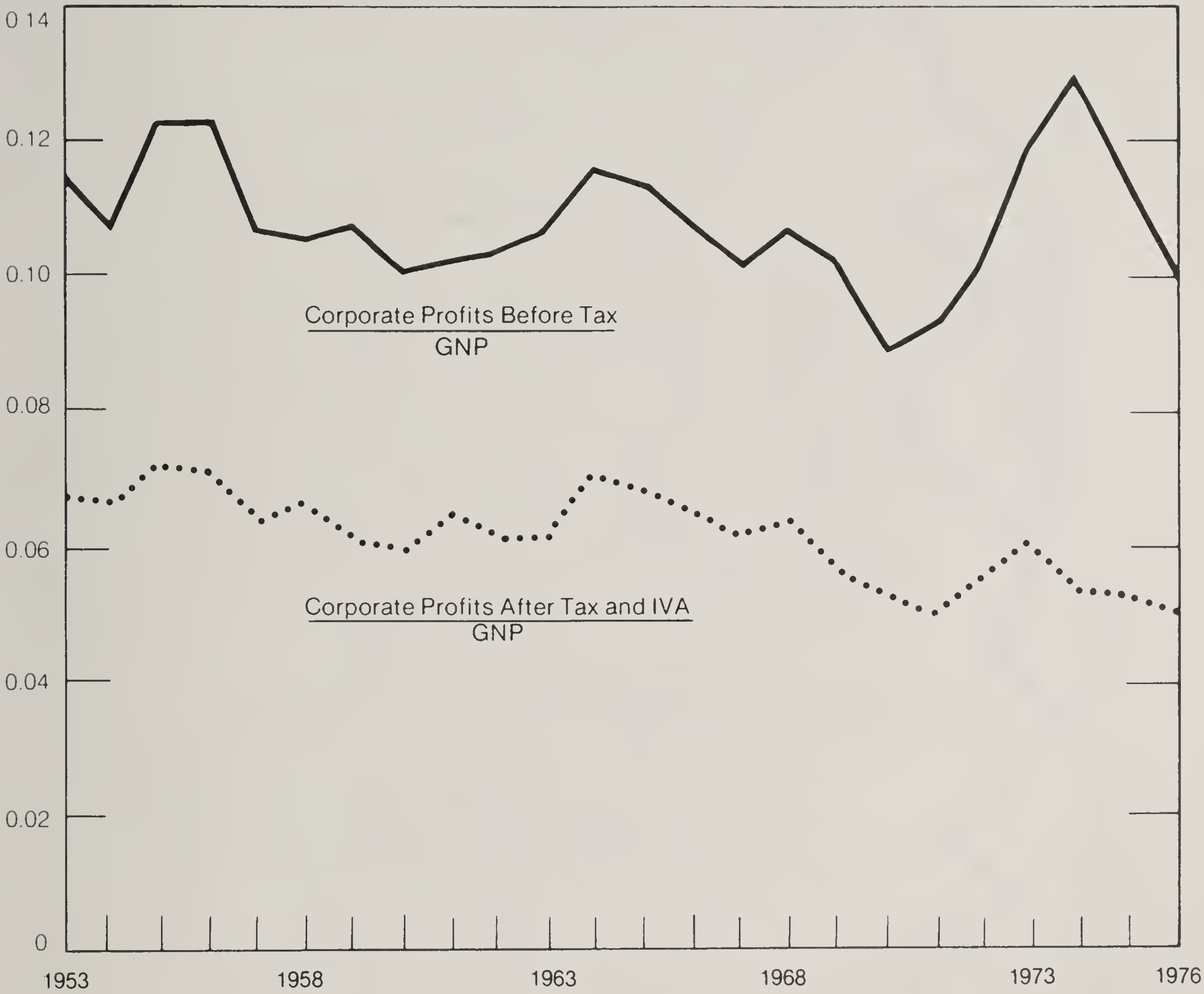


Figure A7

Canada — shares of total saving

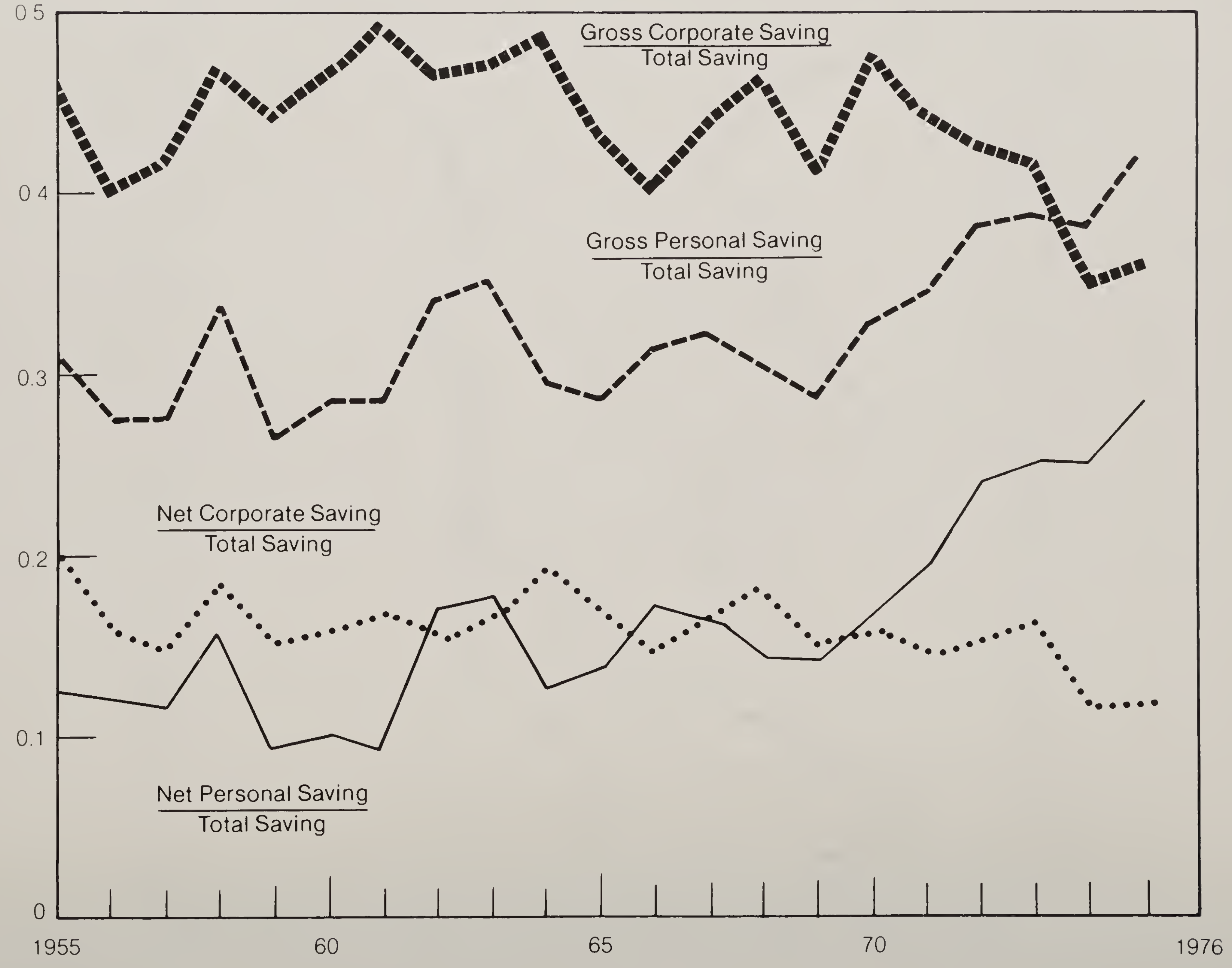


Figure A8 (a)

Canada: internal vs. external financing

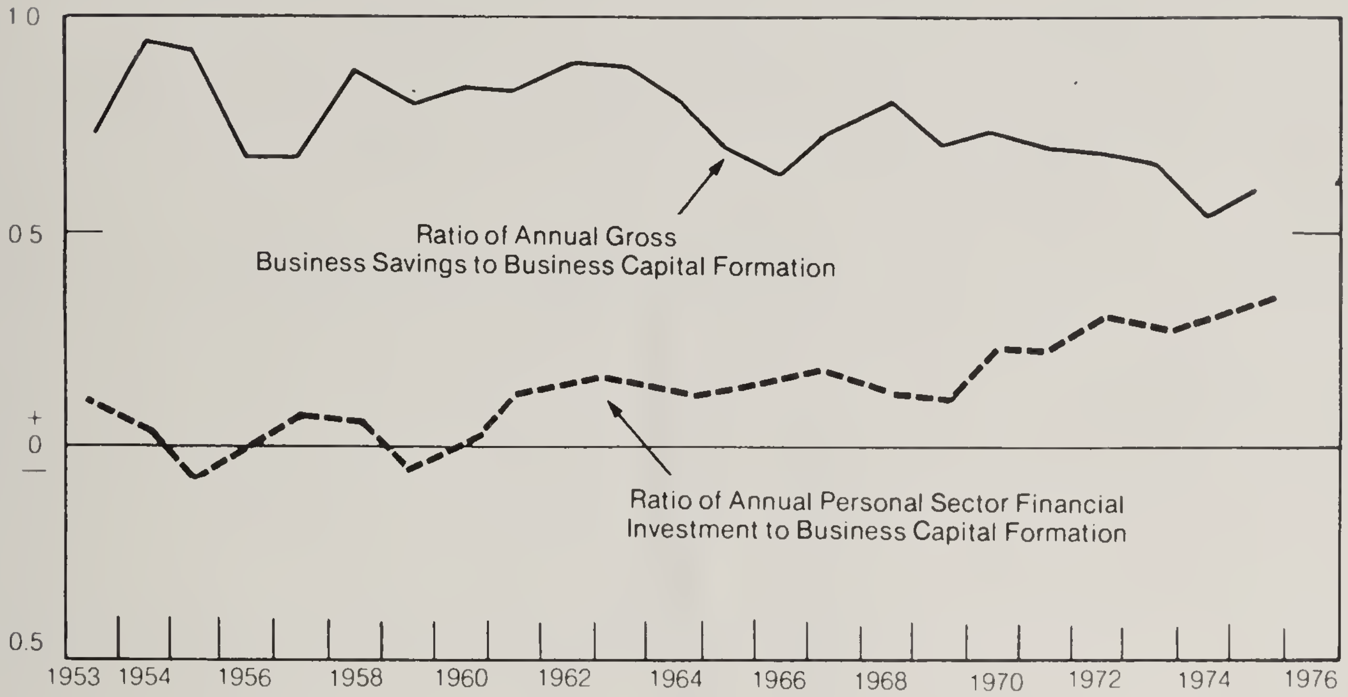
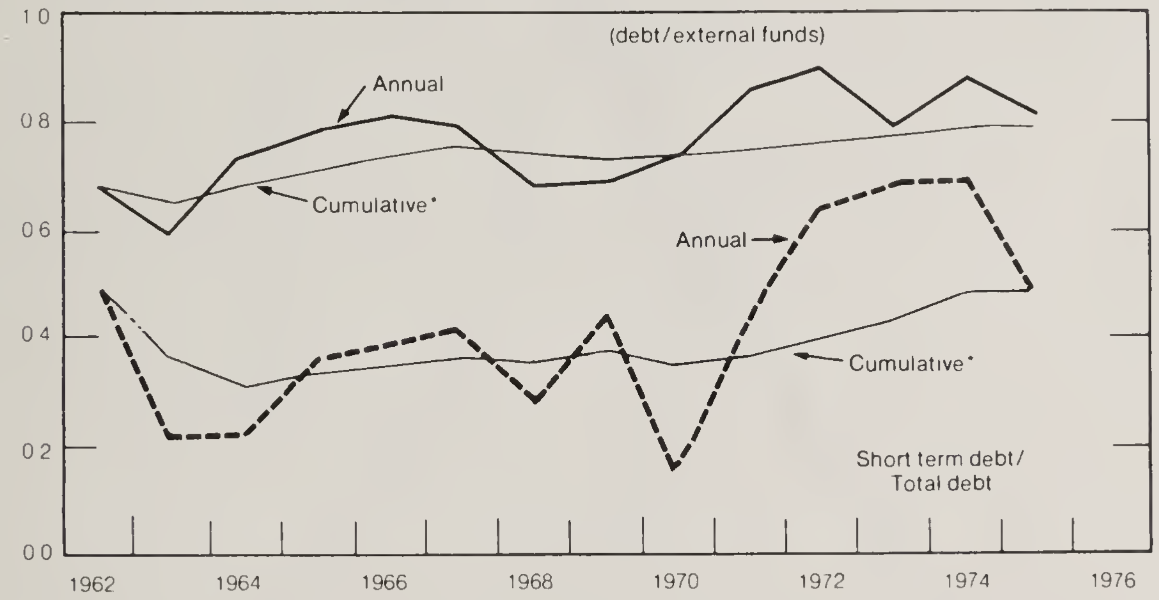


Figure A8 (b)

Canada: composition of external financing



*The 'cumulative' line is simply the summation of the annual flow data. Thus, for example, the 1975 figure of about 50% on the short term debt/total debt line indicates that over the period 1961-75 about half the debt issued has been short term.

Figure A8 (c)

Canada: industrial corporations debt/equity ratio

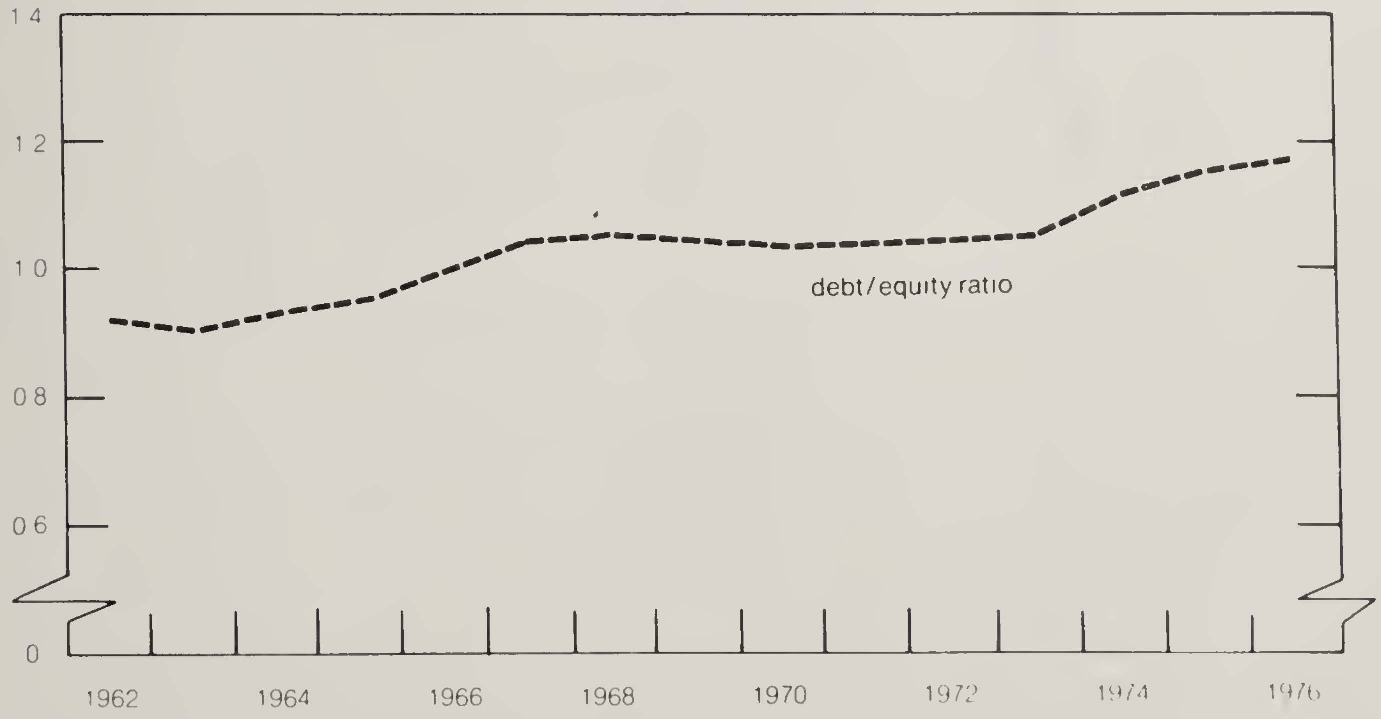
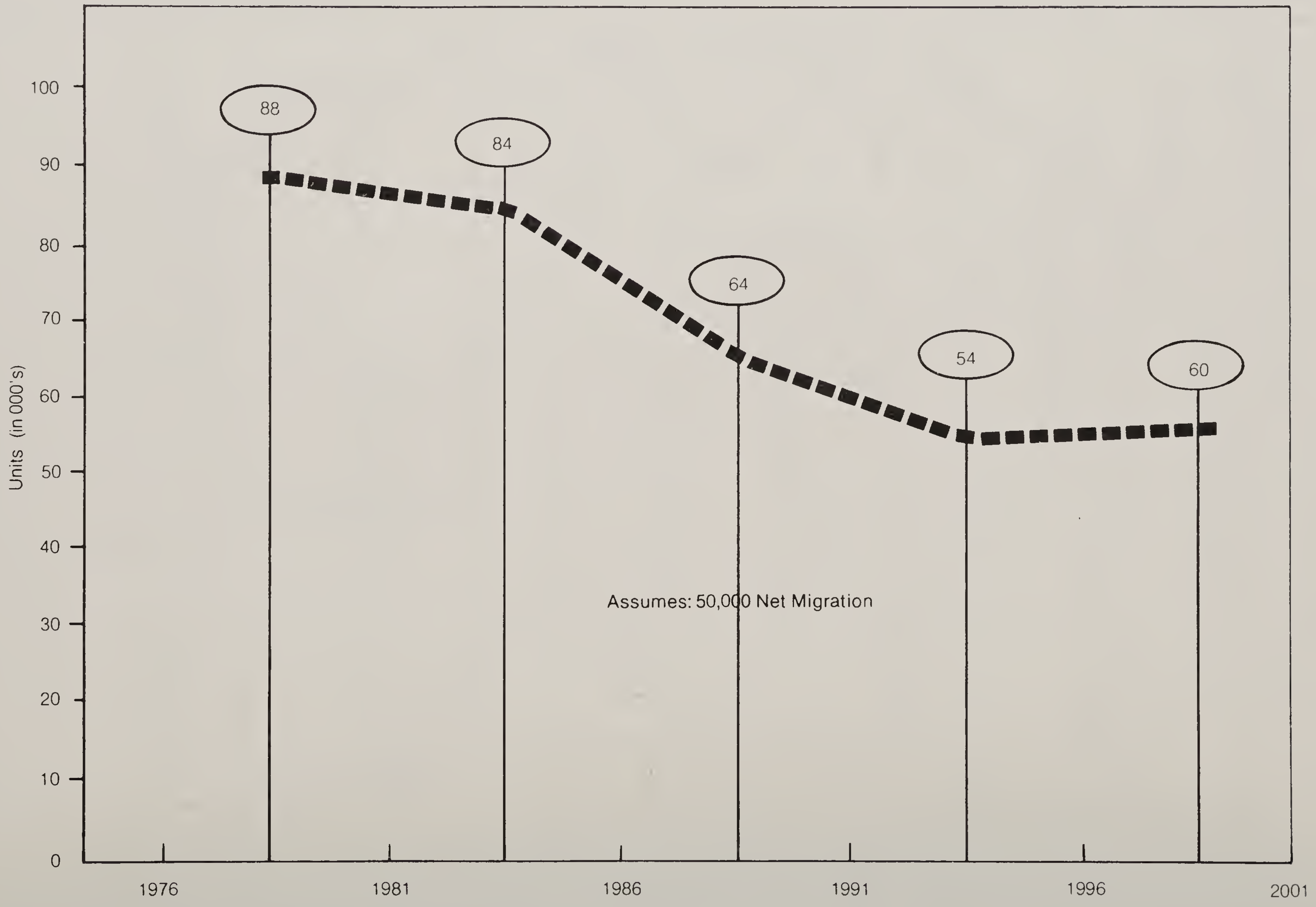


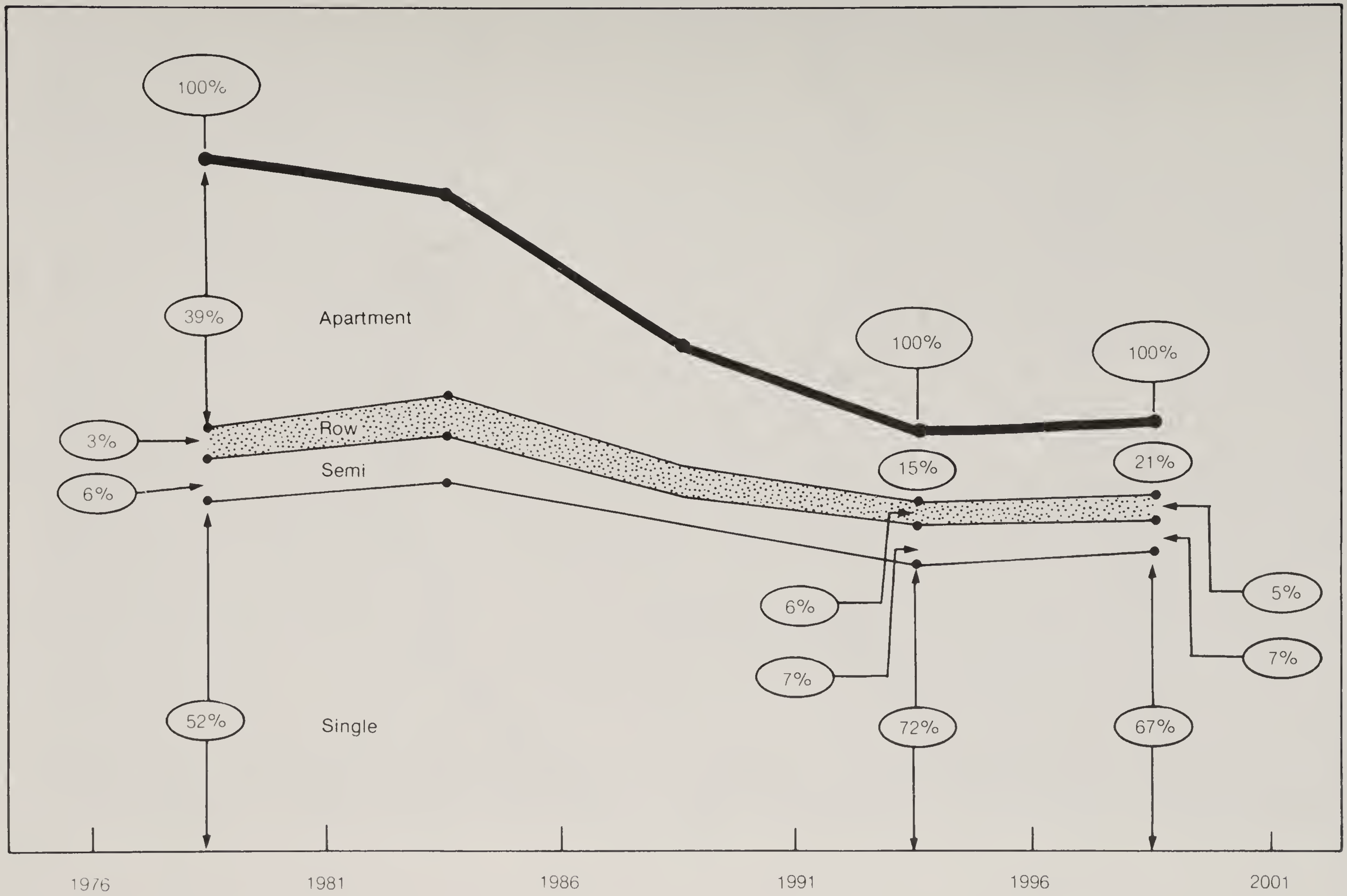
Figure A9
Forecast of housing requirements (in thousands)



Source: Ministry of Housing statement, September 22, 1977

Figure A10

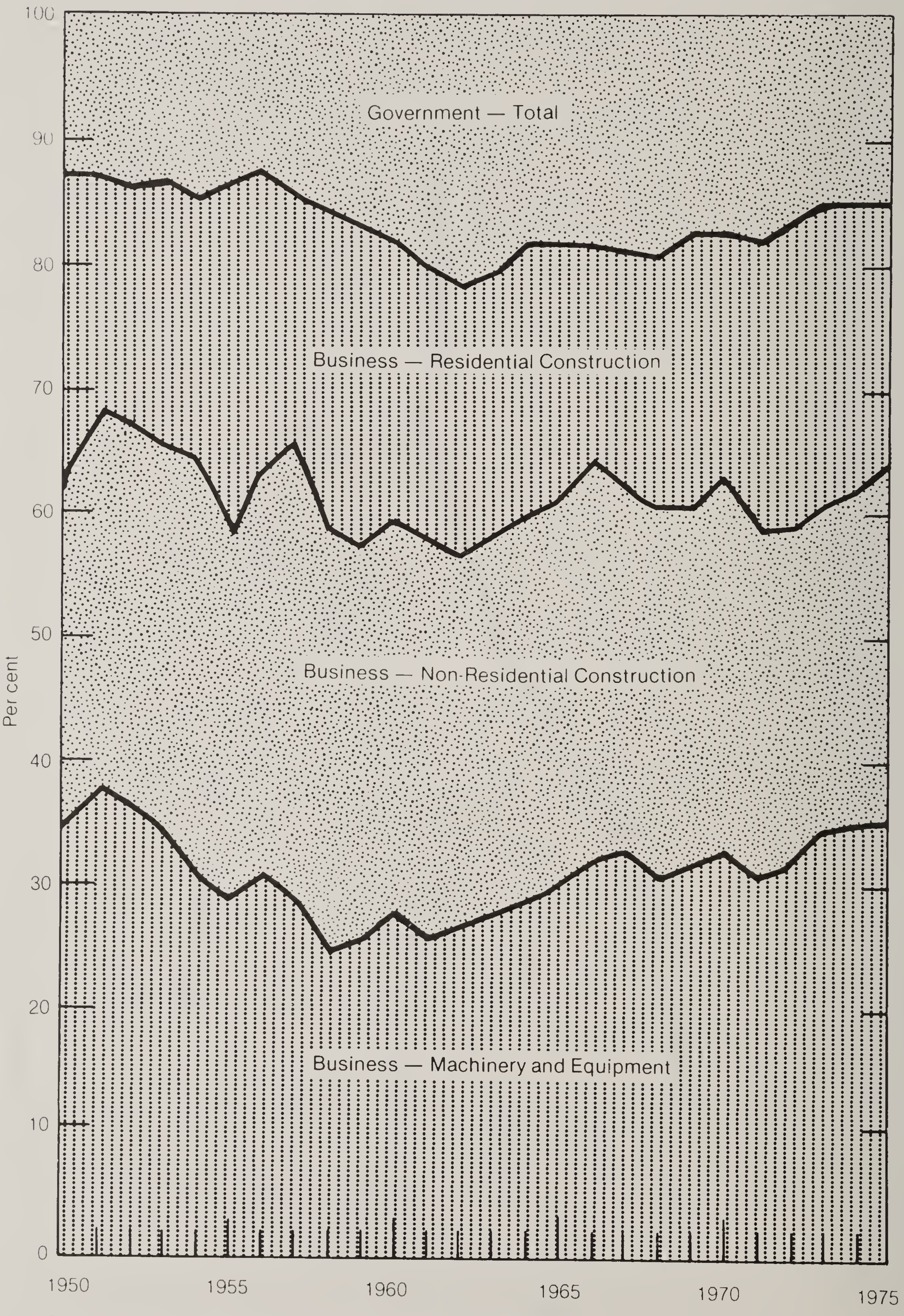
Forecast of percentage of units by type to accommodate new requirements



Source Ministry of Housing statement, September 22, 1977

Figure A11

Composition of gross fixed capital formation



Sources: Statistics Canada; The Conference Board in Canada

Appendix B

Results of Questionnaire on Business Attitudes to the Investment Outlook for the Next Five Years

Q1. DO YOU THINK THAT OVER THE NEXT FIVE YEARS PRICE LEVELS GENERALLY IN THE CANADIAN ECONOMY WILL INCREASE AT A FASTER RATE, AT THE SAME RATE, OR MORE SLOWLY THAN THEY HAVE DURING THE PAST YEAR (APPROXIMATELY EIGHT PERCENT)?

	ALL RESPONDENTS		AT A FASTER RATE	AT ABOUT THE SAME RATE	MORE SLOWLY
	NO.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	157	100.0	16.6	42.7	40.8
INDUSTRIAL BREAKDOWN					
FORESTRY AND FOREST PRODUCTS	15	9.6	.0	66.7	33.3
OIL,GAS & CHEMICALS	30	19.1	16.7	33.3	50.0
MINING,PRIMARY METAL & METAL FABRICATING	23	14.6	8.7	47.8	43.5
FOOD,BEVERAGES&TOBACCO	11	7.0	27.3	36.4	36.4
TEXTILES&CLOTHING	3				
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	13	8.3	15.4	30.8	53.8
NON-METALIC MINERAL PRODUCTS	4				
OTHER MANUFACTURING	6	3.8	16.7	66.7	16.7
FINANCIAL INSTITUTIONS	8	5.1	.0	37.5	62.5
CONSTRUCTION AND REAL ESTATE	10	6.4	10.0	40.0	50.0
COMMERCIAL SERVICES	12	7.6	41.7	58.3	.0
TRANSPORT AND STORAGE	5	3.2	20.0	40.0	40.0
WHOLESALE TRADE	4	2.5	50.0	25.0	25.0
RETAIL TRADE	13	8.3	15.4	30.8	53.8

Q2. OVER THE NEXT FIVE YEARS, WHAT CHANGE IN THE LEVEL OF YOUR ANNUAL AVERAGE CAPITAL INVESTMENT EXPENDITURES DO YOU EXPECT RELATIVE TO THIS PAST YEAR?

	ALL RESPONDENTS		UP 20 PERCENT OR MORE	UP 10-19 PERCENT	UP 1-9 PERCENT	NO CHANGE	DOWN 1-9 PERCENT	DOWN 10-19 PERCENT	DOWN 20 PERCENT OR MORE
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	154	100.0	18.2	22.7	26.6	14.9	4.5	5.8	7.1
INDUSTRIAL BREAKDOWN									
FORESTRY AND FOREST PRODUCTS	15	9.7	20.0	26.7	13.3	20.0	13.3	6.7	.0
OIL,GAS & CHEMICALS	29	18.8	41.4	31.0	10.3	3.4	3.4	10.3	.0
MINING,PRIMARY METAL & METAL FABRICATING	23	14.9	13.0	30.4	13.0	17.4	.0	8.7	17.4
FOOD,BEVERAGES&TOBACCO	11	7.1	9.1	9.1	36.4	18.2	18.2	.0	9.1
TEXTILES&CLOTHING	3								
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	14	9.1	21.4	21.4	42.9	7.1	.0	7.1	.0
NON-METALIC MINERAL PRODUCTS	4								
OTHER MANUFACTURING	6	3.9	.0	16.7	33.3	33.3	.0	.0	16.7
FINANCIAL INSTITUTIONS	5	3.2	.0	20.0	80.0	.0	.0	.0	.0
CONSTRUCTION AND REAL ESTATE	10	6.5	10.0	30.0	40.0	20.0	.0	.0	.0
COMMERCIAL SERVICES	12	7.8	8.3	16.7	50.0	8.3	8.3	.0	8.3
TRANSPORT AND STORAGE	5	3.2	20.0	20.0	40.0	.0	.0	20.0	.0
WHOLESALE TRADE	4	2.6	25.0	50.0	.0	.0	.0	.0	25.0
RETAIL TRADE	13	8.4	7.7	7.7	15.4	46.2	.0	7.7	15.4

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; EXCESS PRODUCTIVE CAPACITY

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	20.6	18.6	7.8	10.8	4.9	37.3
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	10.0	30.0	10.0	20.0	.0	30.0
OIL,GAS & CHEMICALS	19	18.6	21.1	21.1	5.3	15.8	.0	36.8
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	29.4	17.6	17.6	5.9	.0	29.4
FOOD,BEVERAGES&TOBACCO	8	7.8	12.5	37.5	.0	12.5	.0	37.5
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	25.0	50.0	.0	12.5	12.5	.0
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	25.0	.0	25.0	.0	25.0	25.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	40.0	.0	10.0	20.0	20.0	10.0
COMMERCIAL SERVICES	6	5.9	16.7	16.7	.0	.0	.0	66.7
TRANSPORT AND STORAGE	4	3.9	25.0	.0	.0	.0	.0	75.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	12.5	.0	12.5	.0	12.5	62.5

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; DOMESTIC COMPETITION

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	5.9	8.8	6.9	4.9	9.8	63.7
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	10.0	10.0	.0	.0	10.0	70.0
OIL,GAS & CHEMICALS	19	18.6	.0	10.5	5.3	.0	21.1	63.2
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	5.9	11.8	11.8	5.9	5.9	58.8
FOOD,BEVERAGES&TOBACCO	8	7.8	12.5	.0	25.0	.0	12.5	50.0
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	.0	12.5	.0	12.5	.0	75.0
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	.0	.0	.0	25.0	.0	75.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	10.0	20.0	.0	.0	.0	70.0
COMMERCIAL SERVICES	6	5.9	.0	.0	.0	16.7	16.7	66.7
TRANSPORT AND STORAGE	4	3.9	.0	.0	25.0	.0	.0	75.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	12.5	.0	.0	12.5	.0	75.0

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; COMPETITION FROM ABROAD

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	11.8	10.8	4.9	3.9	8.8	59.8
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	30.0	20.0	10.0	.0	20.0	20.0
OIL,GAS & CHEMICALS	19	18.6	21.1	.0	5.3	5.3	5.3	63.2
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	5.9	17.6	.0	5.9	5.9	64.7
FOOD,BEVERAGES&TOBACCO	8	7.8	.0	.0	.0	12.5	37.5	50.0
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	12.5	12.5	12.5	.0	12.5	50.0
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	.0	50.0	25.0	.0	.0	25.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	.0	.0	.0	.0	.0	100.0
COMMERCIAL SERVICES	6	5.9	.0	.0	.0	.0	16.7	83.3
TRANSPORT AND STORAGE	4	3.9	25.0	50.0	.0	25.0	.0	.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	.0	12.5	.0	.0	.0	87.5

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; ESCALATING COST OF CAPITAL GOODS

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	2.9	6.9	8.8	12.7	10.8	57.8
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	.0	.0	.0	20.0	.0	80.0
OIL,GAS & CHEMICALS	19	18.6	.0	.0	15.8	26.3	5.3	52.6
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	.0	23.5	11.8	5.9	11.8	47.1
FOOD,BEVERAGES&TOBACCO	8	7.8	.0	12.5	.0	12.5	12.5	62.5
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	.0	12.5	.0	.0	25.0	62.5
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	.0	.0	.0	25.0	25.0	50.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	.0	.0	10.0	.0	20.0	70.0
COMMERCIAL SERVICES	6	5.9	33.3	.0	.0	16.7	.0	50.0
TRANSPORT AND STORAGE	4	3.9	.0	.0	50.0	25.0	.0	25.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	12.5	.0	.0	12.5	.0	75.0

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; ESCALATING LABOUR COSTS

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	4.9	9.8	18.6	14.7	9.8	42.2
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	10.0	.0	40.0	.0	10.0	40.0
OIL,GAS & CHEMICALS	19	18.6	.0	10.5	5.3	10.5	15.8	57.9
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	.0	.0	5.9	35.3	17.6	41.2
FOOD,BEVERAGES&TOBACCO	8	7.8	.0	12.5	37.5	.0	.0	50.0
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	12.5	.0	12.5	.0	.0	75.0
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	25.0	.0	25.0	.0	.0	50.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	.0	.0	40.0	30.0	10.0	20.0
COMMERCIAL SERVICES	6	5.9	.0	16.7	33.3	50.0	.0	.0
TRANSPORT AND STORAGE	4	3.9	.0	50.0	.0	.0	.0	50.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	.0	25.0	25.0	.0	25.0	25.0

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; FINANCING PROBLEMS WITH RESPECT TO EITHER AVAILABILITY OR COST

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	7.8	1.0	6.9	4.9	7.8	71.6
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	.0	.0	20.0	.0	10.0	70.0
OIL,GAS & CHEMICALS	19	18.6	5.3	.0	10.5	10.5	15.8	57.9
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	5.9	5.9	5.9	5.9	.0	76.5
FOOD,BEVERAGES&TOBACCO	8	7.8	.0	.0	.0	.0	12.5	87.5
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	25.0	.0	.0	.0	.0	75.0
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	25.0	.0	.0	.0	25.0	50.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	10.0	.0	.0	.0	.0	90.0
COMMERCIAL SERVICES	6	5.9	16.7	.0	16.7	.0	.0	66.7
TRANSPORT AND STORAGE	4	3.9	.0	.0	.0	25.0	.0	75.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	.0	.0	.0	12.5	12.5	75.0

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; LACK OF SKILLED LABOUR

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	.0	.0	2.0	7.8	2.9	87.3
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	.0	.0	.0	10.0	.0	90.0
OIL,GAS & CHEMICALS	19	18.6	.0	.0	5.3	.0	5.3	89.5
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	.0	.0	5.9	17.6	11.8	64.7
FOOD,BEVERAGES&TOBACCO	8	7.8	.0	.0	.0	.0	.0	100.0
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	.0	.0	.0	12.5	.0	87.5
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	.0	.0	.0	.0	.0	100.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	.0	.0	.0	.0	.0	100.0
COMMERCIAL SERVICES	6	5.9	.0	.0	.0	.0	.0	100.0
TRANSPORT AND STORAGE	4	3.9	.0	.0	.0	.0	.0	100.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	.0	.0	.0	.0	.0	100.0

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; GOVERNMENT INTERFERENCE IN THE DECISION MAKING PROCESS

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	23.5	12.7	11.8	9.8	15.7	26.5
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	10.0	.0	10.0	10.0	30.0	40.0
OIL,GAS & CHEMICALS	19	18.6	26.3	21.1	10.5	5.3	15.8	21.1
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	35.3	11.8	11.8	5.9	5.9	29.4
FOOD,BEVERAGES&TOBACCO	8	7.8	37.5	.0	12.5	12.5	25.0	12.5
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	12.5	.0	12.5	12.5	12.5	50.0
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	25.0	.0	25.0	25.0	25.0	.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	30.0	40.0	10.0	10.0	.0	10.0
COMMERCIAL SERVICES	6	5.9	16.7	.0	.0	16.7	16.7	50.0
TRANSPORT AND STORAGE	4	3.9	50.0	.0	25.0	.0	25.0	.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	12.5	12.5	25.0	12.5	25.0	12.5

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; GOVERNMENT TAX POLICY

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	7.6	15.7	14.7	18.6	6.9	36.3
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	.0	10.0	10.0	30.0	.0	50.0
OIL,GAS & CHEMICALS	19	18.6	10.5	31.6	21.1	15.8	.0	21.1
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	11.8	5.9	5.9	5.9	17.6	52.9
FOOD,BEVERAGES&TOBACCO	8	7.8	25.0	.0	.0	37.5	.0	37.5
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	.0	.0	37.5	37.5	.0	25.0
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	.0	25.0	.0	.0	.0	75.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	.0	30.0	10.0	20.0	20.0	20.0
COMMERCIAL SERVICES	6	5.9	16.7	33.3	33.3	.0	16.7	.0
TRANSPORT AND STORAGE	4	3.9	.0	.0	.0	25.0	.0	75.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	12.5	12.5	25.0	12.5	12.5	25.0

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; NATIONAL UNITY AND POTENTIAL SEPARATION

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	9.8	10.8	13.7	7.8	18.6	39.2
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	20.0	10.0	.0	10.0	10.0	50.0
OIL,GAS & CHEMICALS	19	18.6	10.5	.0	10.5	5.3	15.8	57.9
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	.0	5.9	17.6	.0	17.6	58.8
FOOD,BEVERAGES&TOBACCO	8	7.8	12.5	37.5	25.0	12.5	.0	12.5
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	12.5	.0	25.0	.0	37.5	25.0
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	.0	25.0	.0	25.0	.0	50.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	10.0	10.0	20.0	20.0	30.0	10.0
COMMERCIAL SERVICES	6	5.9	.0	16.7	16.7	.0	.0	66.7
TRANSPORT AND STORAGE	4	3.9	.0	.0	.0	.0	75.0	25.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	12.5	37.5	.0	25.0	12.5	12.5

Q3. WHAT FIVE MAIN FACTORS (IN RANK ORDER) DO YOU FORESEE ADVERSELY AFFECTING THE LEVEL OF YOUR PLANNED INVESTMENT EXPENDITURES IN CANADA OVER THE NEXT FIVE YEARS ?

FACTOR UNDER CONSIDERATION; OTHER FACTORS

	ALL RESPONDENTS		RANKED AS NO. ONE	RANKED AS NO. TWO	RANKED AS NO. THREE	RANKED AS NO. FOUR	RANKED AS NO. FIVE	NOT RANKED
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	102	100.0	4.9	4.9	3.9	3.9	3.9	78.4
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	10	9.8	10.0	20.0	.0	.0	10.0	60.0
OIL,GAS & CHEMICALS	19	18.6	5.3	5.3	5.3	5.3	.0	78.9
MINING,PRIMARY METAL & METAL FABRICATING	17	16.7	5.9	.0	5.9	5.9	5.9	76.5
FOOD,BEVERAGES&TOBACCO	8	7.8	.0	.0	.0	.0	.0	100.0
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	8	7.8	.0	12.5	.0	12.5	.0	75.0
NON-METALIC MINERAL PRODUCTS	2							
OTHER MANUFACTURING	4	3.9	.0	.0	.0	.0	.0	100.0
FINANCIAL INSTITUTIONS	0							
CONSTRUCTION AND REAL ESTATE	10	9.8	.0	.0	.0	.0	.0	100.0
COMMERCIAL SERVICES	6	5.9	.0	16.7	.0	.0	33.3	50.0
TRANSPORT AND STORAGE	4	3.9	.0	.0	.0	.0	.0	100.0
WHOLESALE TRADE	3							
RETAIL TRADE	8	7.8	25.0	.0	12.5	12.5	.0	50.0

Q4. WHAT HAS BEEN THE AVERAGE PERCENTAGE BREAKDOWN OF THE SOURCE OF YOUR CAPITAL FINANCING OVER THE PAST FIVE YEARS ?

	ALL RESPONDENTS		INTERNAL FUNDS			EXTERNAL FUNDS RAISED DOMESTICALLY			EXTERNAL FUNDS RAISED IN FOREIGN MARKETS		
	NO.	PER.	MEAN	MED.	STD.DEV.	MEAN	MED.	STD.DEV.	MEAN	MED.	STD.DEV.
TOTAL RESPONSE	153	100.0	62.9	70.0	33.97	31.1	20.0	31.08	6.0	.0	14.20
INDUSTRIAL BREAKDOWN											
FORESTRY AND FOREST PRODUCTS	15	9.8	68.3	80.0	31.72	28.3	20.0	29.47	3.4	.0	9.21
OIL,GAS & CHEMICALS	30	19.6	68.7	80.0	31.58	23.4	15.0	27.85	7.9	.0	13.51
MINING,PRIMARY METAL & METAL FABRICATING	19	12.4	72.3	85.0	29.69	22.9	10.0	28.34	4.8	.0	9.69
FOOD,BEVERAGES&TOBACCO	12	7.8	66.7	75.0	28.71	28.6	15.0	20.99	4.8	.0	11.19
TEXTILES&CLOTHING	3										
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	14	9.2	76.9	93.5	31.57	18.9	5.0	29.75	4.1	.0	13.28
NON-METALIC MINERAL PRODUCTS	4	2.6	67.5	75.0	34.03	32.5	25.0	34.03	.0	.0	.00
OTHER MANUFACTURING	6	3.9	34.2	25.0	35.56	65.0	75.0	36.74	.8	.0	2.04
FINANCIAL INSTITUTIONS	7	4.6	65.7	80.0	39.10	22.1	20.0	24.81	12.1	.0	24.47
CONSTRUCTION AND REAL ESTATE	10	6.5	44.0	25.0	34.43	55.5	75.0	33.91	.5	.0	1.58
COMMERCIAL SERVICES	12	7.8	61.1	75.0	42.34	25.4	.0	33.40	13.5	.0	26.31
TRANSPORT AND STORAGE	5	3.3	47.4	50.0	18.04	46.6	40.0	24.38	6.0	.0	8.94
WHOLESALE TRADE	3										
RETAIL TRADE	13	8.5	55.8	68.0	36.54	38.8	32.0	32.56	5.4	.0	13.79

Q5. OVER THE NEXT FIVE YEARS WHAT DO YOU EXPECT TO BE THE AVERAGE PERCENTAGE BREAKDOWN OF THE SOURCE OF YOUR CAPITAL FINANCING ?

	ALL RESPONDENTS		INTERNAL FUNDS			EXTERNAL FUNDS RAISED DOMESTICALLY			EXTERNAL FUNDS RAISED IN FOREIGN MARKETS		
	NO.	PER.	MEAN	MED.	STD.DEV.	MEAN	MED.	STD.DEV.	MEAN	MED.	STD.DEV.
TOTAL RESPONSE	153	100.0	63.1	70.0	31.06	30.5	25.0	29.22	6.4	.0	13.56
INDUSTRIAL BREAKDOWN											
FORESTRY AND FOREST PRODUCTS	15	9.8	64.2	60.0	31.30	25.9	26.0	29.92	9.9	.0	13.85
OIL,GAS & CHEMICALS	29	19.0	64.7	70.0	29.59	28.0	25.0	29.42	7.3	.0	12.89
MINING,PRIMARY METAL & METAL FABRICATING	19	12.4	63.2	75.0	34.57	33.3	20.0	34.58	3.5	.0	7.57
FOOD,BEVERAGES&TOBACCO	12	7.8	70.8	75.0	26.10	29.2	25.0	26.10	.0	.0	.00
TEXTILES&CLOTHING	3										
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	14	9.2	67.4	79.5	34.70	15.4	.0	26.05	17.2	.0	29.00
NON-METALIC MINERAL PRODUCTS	4	2.6	52.5	60.0	23.63	42.5	40.0	29.86	5.0	.0	10.00
OTHER MANUFACTURING	6	3.9	63.3	60.0	25.03	36.7	40.0	25.03	.0	.0	.00
FINANCIAL INSTITUTIONS	7	4.6	62.1	75.0	36.50	32.9	25.0	29.42	5.0	.0	8.66
CONSTRUCTION AND REAL ESTATE	10	6.5	44.5	37.5	30.95	51.0	50.0	27.97	4.5	.0	7.98
COMMERCIAL SERVICES	12	7.8	61.5	55.0	33.01	32.1	32.5	28.00	6.4	.0	11.42
TRANSPORT AND STORAGE	5	3.3	61.8	65.0	22.55	25.8	19.0	22.26	12.4	10.0	8.88
WHOLESALE TRADE	4										
RETAIL TRADE	13	8.5	72.2	75.0	31.30	23.5	25.0	23.57	4.3	.0	13.83

Q6. TO WHAT EXTENT, IN THE PAST FIVE YEARS, HAVE REQUIRED INVESTMENT EXPENDITURES TO MEET LEGISTLATED ENVIRONMENTAL STANDARDS MADE YOUR COMPANY UNCOMPETITIVE INTERNATIONALLY?

	ALL RESPONDENTS		TO A GREAT EXTENT	TO A MINOR EXTENT	NOT AFFECTED
	NO.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	152	100.0	3.9	38.2	57.9
INDUSTRIAL BREAKDOWN					
FORESTRY AND FOREST PRODUCTS	15	9.9	.0	86.7	13.3
OIL,GAS & CHEMICALS	29	19.1	6.9	44.8	48.3
MINING,PRIMARY METAL & METAL FABRICATING	22	14.5	13.6	40.9	45.5
FOOD,BEVERAGES&TOBACCO	12	7.9	.0	58.3	41.7
TEXTILES&CLOTHING	3				
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	14	9.2	.0	50.0	50.0
NON-METALIC MINERAL PRODUCTS	4				
OTHER MANUFACTURING	6	3.9	.0	16.7	83.3
FINANCIAL INSTITUTIONS	4	2.6	.0	.0	100.0
CONSTRUCTION AND REAL ESTATE	10	6.6	.0	.0	100.0
COMMERCIAL SERVICES	12	7.9	8.3	16.7	75.0
TRANSPORT AND STORAGE	4	2.6	.0	75.0	25.0
WHOLESALE TRADE	4	2.6	.0	.0	100.0
RETAIL TRADE	13	8.6	.0	15.4	84.6

Q7. TO WHAT EXTENT DO YOU EXPECT THAT REQUIRED INVESTMENT EXPENDITURES TO MEET CURRENTLY LEGISTLATED ENVIRONMENTAL STANDARDS WILL MAKE YOUR COMPANY UNCOMPETITIVE INTERNATIONALLY OVER THE NEXT FIVE YEARS?

	ALL RESPONDENTS		TO A GREAT EXTENT	TO A MINOR EXTENT	NOT AFFECTED
	NO.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	151	100.0	7.3	39.7	53.0
INDUSTRIAL BREAKDOWN					
FORESTRY AND FOREST PRODUCTS	15	9.9	26.7	60.0	13.3
OIL,GAS & CHEMICALS	28	18.5	7.1	50.0	42.9
MINING,PRIMARY METAL & METAL FABRICATING	22	14.6	18.2	40.9	40.9
FOOD,BEVERAGES&TOBACCO	12	7.9	.0	58.3	41.7
TEXTILES&CLOTHING	3				
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	14	9.3	.0	50.0	50.0
NON-METALIC MINERAL PRODUCTS	4				
OTHER MANUFACTURING	6	4.0	.0	16.7	83.3
FINANCIAL INSTITUTIONS	4	2.6	.0	.0	100.0
CONSTRUCTION AND REAL ESTATE	10	6.6	.0	.0	100.0
COMMERCIAL SERVICES	12	7.9	.0	41.7	58.3
TRANSPORT AND STORAGE	4	2.6	.0	75.0	25.0
WHOLESALE TRADE	4	2.6	.0	.0	100.0
RETAIL TRADE	13	8.6	.0	23.1	76.9

Q8. WHAT PERCENTAGE OF YOUR EXISTING FACILITIES WOULD BECOME UNCOMPETITIVE IF PRESENT IMPORT TARRIFF PROTECTION ON YOUR PRODUCT(S) WERE REDUCED BY 50 PERCENT ?

	ALL RESPONDENTS		ZERO PERCENT	01-20 PERCENT	21-40 PERCENT	41-60 PERCENT	61-80 PERCENT	81-100 PERCENT
	NO.	PER.	PER.	PER.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	131	100.0	52.7	19.8	13.0	8.4	4.6	1.5
INDUSTRIAL BREAKDOWN								
FORESTRY AND FOREST PRODUCTS	14	10.7	21.4	35.7	14.3	14.3	7.1	7.1
OIL,GAS & CHEMICALS	22	16.8	50.0	22.7	4.5	18.2	4.5	.0
MINING,PRIMARY METAL & METAL FABRICATING	19	14.5	52.6	15.8	31.6	.0	.0	.0
FOOD,BEVERAGES&TOBACCO	11	8.4	81.8	18.2	.0	.0	.0	.0
TEXTILES&CLOTHING	3							
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	13	9.9	30.8	23.1	23.1	7.7	7.7	7.7
NON-METALIC MINERAL PRODUCTS	4	3.1	50.0	.0	.0	50.0	.0	.0
OTHER MANUFACTURING	6	4.6	.0	50.0	33.3	16.7	.0	.0
FINANCIAL INSTITUTIONS	3							
CONSTRUCTION AND REAL ESTATE	8	6.1	100.0	.0	.0	.0	.0	.0
COMMERCIAL SERVICES	12	9.2	66.7	16.7	16.7	.0	.0	.0
TRANSPORT AND STORAGE	3							
WHOLESALE TRADE	4	3.1	50.0	25.0	.0	.0	25.0	.0
RETAIL TRADE	9	6.9	88.9	11.1	.0	.0	.0	.0

Q9. IN YOUR AREA(S) OF PRODUCTION HAVE YOUR PRODUCTIVITY LEVELS, RELATIVE TO THE UNITED STATES, OVER THE LAST FIVE YEARS BEEN HIGHER THAN IN THE UNITED STATES, EQUAL TO THOSE IN THE UNITED STATES OR LOWER THAN THOSE IN THE UNITED STATES?

	ALL RESPONDENTS		HIGHER THAN IN THE U.S.	EQUAL TO THOSE IN THE U.S.	LOWER THAN THOSE IN THE U.S.
	NO.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	134	100.0	10.4	32.1	57.5
INDUSTRIAL BREAKDOWN					
FORESTRY AND FOREST PRODUCTS	15	11.2	.0	20.0	80.0
OIL,GAS & CHEMICALS	24	17.9	12.5	45.8	41.7
MINING,PRIMARY METAL & METAL FABRICATING	20	14.9	20.0	40.0	40.0
FOOD,BEVERAGES&TOBACCO	12	9.0	8.3	33.3	58.3
TEXTILES&CLOTHING	3				
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	14	10.4	.0	28.6	71.4
NON-METALIC MINERAL PRODUCTS	4	3.0	25.0	25.0	50.0
OTHER MANUFACTURING	6	4.5	.0	50.0	50.0
FINANCIAL INSTITUTIONS	3				
CONSTRUCTION AND REAL ESTATE	9	6.7	11.1	22.2	66.7
COMMERCIAL SERVICES	10	7.5	20.0	30.0	50.0
TRANSPORT AND STORAGE	5	3.7	20.0	40.0	40.0
WHOLESALE TRADE	4	3.0	.0	25.0	75.0
RETAIL TRADE	5	3.7	.0	20.0	80.0

Q10.IN YOUR AREA(S) OF PRODUCTION DO YOU FORESEE THAT PRODUCTIVITY LEVELS, (OUTPUT PER MAN HOUR) RELATIVE TO THE UNITED STATES WILL, OVER THE NEXT FIVE YEARS, STAY CONSTANT, MOVE IN CANADA'S FAVOUR OR MOVE IN THE UNITED STATES' FAVOUR ?

	ALL RESPONDENTS		STAY CONSTANT	MOVE IN CANADA'S FAVOUR	MOVE IN THE UNITED STATES' FAVOUR
	NO.	PER.	PER.	PER.	PER.
TOTAL RESPONSE	138	100.0	47.8	15.9	36.2
INDUSTRIAL BREAKDOWN					
FORESTRY AND FOREST PRODUCTS	15	10.9	73.3	6.7	20.0
OIL,GAS & CHEMICALS	26	18.8	53.8	19.2	26.9
MINING,PRIMARY METAL & METAL FABRICATING	21	15.2	66.7	9.5	23.8
FOOD,BEVERAGES&TOBACCO	12	8.7	50.0	8.3	41.7
TEXTILES&CLOTHING	3				
MACHINARY,ELEC. PRODUCTS&TRANS EQUIP.	14	10.1	35.7	21.4	42.9
NON-METALIC MINERAL PRODUCTS	4				
OTHER MANUFACTURING	5	3.6	40.0	20.0	40.0
FINANCIAL INSTITUTIONS	4	2.9	25.0	.0	75.0
CONSTRUCTION AND REAL ESTATE	9	6.5	33.3	.0	66.7
COMMERCIAL SERVICES	9	6.5	22.2	33.3	44.4
TRANSPORT AND STORAGE	5	3.6	40.0	40.0	20.0
WHOLESALE TRADE	4	2.9	.0	.0	100.0
RETAIL TRADE	7	5.1	42.9	28.6	28.6

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